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A Higher Type of Manhood—Moral, Physical, and Intellectual.

OLD SERIES—Vols. 81, 82. NEW SERIES—Vols 17, 18

M. L. HOLBROOK, M. D., Editor.

NEW YORK:
WOOD & HOLBROOK, PUBLISHERS,
Nos. 13 & 15 LAIGHT STREET.

1871.



YOUTH

CULTURE,

Intellectual, and Moral.

JANUARY, 1871.

Page	EDITORIAL DEPARTMENT :	
1	A New Year's Talk—Hygiene.....	33
6	The First of January—Wine—Literary Value of Good Health.....	34
8	Weston, the Walker—Insanity in Paris—The Thralldom of Fashion.....	36
9	Stamping Out Scarlet Fever—Compensation.....	37
13	Plea Against Whiskers by an Old Man.....	38
17	HOW TO TREAT THE SICK :	
17	Has Scarlet Fever any Right to so Many Victims?.....	39
18	An Ulcer Cured by a Dog.....	41
21	FOOD FOR MIRTH AND THOUGHT.....	42
25	ANSWERS TO CORRESPONDENTS :	
29	Short-heeled Shoes and Flat Feet—To Remove Hair—Dizziness—Rheumatism.....	43
32	Position of Head During Sleep—How to Cure a Cold—Liver as Food, etc.....	44

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THE HERALD OF HEALTH

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JOURNAL OF PHYSICAL CULTURE.

VOL 17, No. 1.]

NEW YORK, JANUARY, 1871.

[NEW SERIES.]

PUBLISHED MONTHLY BY WOOD & HOLBROOK, 13 & 15 LAIGHT STREET.

A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

EMBRACED IN A SERIES OF TWELVE ESSAYS CONTRIBUTED BY OUR BEST THINKERS AND WRITERS.

No. III.—THE EFFECTS OF ALCOHOL ON OFFSPRING.

BY NATHAN ALLEN, M. D.

WHEN Jehovah issued his commands in the Decalogue, not only to the Israelites, but to his creatures in all coming time, saying: "I the Lord thy God, am a jealous God, visiting the iniquity of the fathers upon the children, unto the third and fourth generations," it was intended that there should be some meaning in that visitation. When the laws of the human system are correctly and fully understood, it will be seen that this ordinance is not all a dead letter. In the execution of the above decree, whatever divine influences or agencies may be brought into operation in other respects, it is positively certain that, by the fixed laws of hereditary descent, the iniquities of the fathers are visited upon the children unto the second, third, and fourth generations. The term "iniquity," as here used, has a broad signification, including the consequences or penalties of each and every violated law, whether that law be expressed in the revealed command of God, or stamped by the same almighty power upon the human constitution.

It is proposed to consider, in the present pa-

per, only one of the ways in which the above law of God is violated or infringed, and point out some of the consequences resulting from its violation. In this discussion it is assumed that man was endowed at his creation with certain great laws, physical and mental, which, in order to secure the highest objects of his existence, must be obeyed. As one agent having a powerful influence upon these laws, what relation, then, does alcohol sustain to the human system, and what are some of its more permanent effects?

First, then, what is alcohol? By this term it is intended to include the property in all drinks that *intoxicates*, whether found in brandy, gin, wine, whisky, or even in beer and cider; for it is the *intoxicating* property that gives these drinks their significance and makes them attractive.

Alcohol is an artificial product, obtained by fermentation, and is never found in a simple state. It is a *poison*, both in its nature and effects; is pronounced as such by the highest authorities, and proved to be such by the tests of

chemistry, as well as of physiology. Alcohol, unadulterated, is a *pure* poison, and though taken into the system in a diluted state without, at first apparently, any injurious effects, it is still a poison, and does the work of a poisonous agent.

All standard books on poisons—of which Christison's is, perhaps, the highest authority—represent alcohol as a poison. Says Christison: "It constitutes a powerful narcotic poison." Carpenter, author of the best work on Physiology extant, says that alcohol "is a dangerous poison." All standard works upon chemistry classify it among the poisons. The best writers on *Materia Medica* describe alcohol as a poison. Pereira, perhaps the most distinguished among these writers, calls it both "an irritant and fatal poison." The French, the British, and the American Dispensatories—high authorities everywhere in such matters—describe alcohol as a "powerful irritant poison, rapidly causing intoxication and, in large quantities, death." Medical dictionaries say the same thing; in fact, all standard writers on the subject agree in this description. But, to be more direct and practical, what are *the effects* of alcohol upon the human system? Is it a genuine poison by this test?

First, then, the use of alcohol irritates and inflames the mucous membrane of the stomach to such an extent that it gradually becomes thickened and corrugated—sometimes scirrhus and cancerated, or softened and disorganized. It vitiates the gastric juice, or destroys the glands secreting it, thereby preventing the healthy digestion of food. Thus, by changing the structure and proper action of the stomach, not only the natural appetite is supplanted or rendered morbid, but the blood itself, the great supporter of life, is impoverished, and becomes tainted or impregnated with qualities very unwholesome and injurious. As a consequence of this change in the blood, both the structure and functions of other organs in the body become changed or deranged in action. The liver is enlarged or shriveled up—is pale, fatty, scirrhus, cancerous, etc., so that the bile, its natural secretion, is changed, which prevents the proper assimilation of food, and interferes also with the healthy action of the bowels. The kidneys, at times, become affected, resulting in serious derangement or disease of these organs.

By this deprivation of blood, the fibrous and muscular tissues of the whole body frequently become softened and relaxed, so that the constitution looses, in a great measure, its stamina and vitality. This is indicated by a state of general debility, by a peculiar paleness of the

countenance, and by a kind of bloated appearance of the whole system.

Again, alcohol impairs the healthy action of both the heart and the lungs—first, by causing an unnatural circulation of blood through these organs; and, secondly, the strength or power of these most influential organs is more or less reduced by the poor quality of the nutrition supplied to them. Certain diseases of both the heart and the lungs have been traced repeatedly to these two sources.

But the brain, the most important part of the body, is more unfavorably affected by alcohol than any other organ, and that, too, in a variety of ways. It tends directly to produce an unnatural stimulus of the brain, as well as an abnormal state of mind, which, together with impoverished nutrition, serves to weaken or derange it. As the brain is a complex instrument, composed of a variety of parts, performing distinct functions, the effects of alcohol are very much diversified. In persons possessing a predominance of the nervous temperament it produces an unnatural excitement, a peculiar irritability, and sometimes moroseness of disposition; but where there is a deficient intellectual development, the individual is frequently silly, boisterous, and passionate, without any occasion or good reason.

In cases where the lymphatic or sanguine temperament predominates, the effects of alcohol are frequently exhibited by a grossness of manner, a sensuality of feeling, and an excessive activity of the animal propensities. There are two important considerations in the relation which this powerful agent sustains to the brain. First, on account, relatively, of the very large development of organs in the lower part of the brain, and the immediate connection of their functions with those of the body, alcohol acts more particularly upon the animal propensities, and serves to develop more and more the lowest part of man's nature. Secondly, at the same time as that portion of the brain by which it is understood the moral sentiments and the intellectual faculties are manifested, constitute, relatively, a small development, and is located farthest from the trunk of the body, these higher faculties, in the lover of intoxicating drinks, are not called into exercise so much, and therefore do not gain strength and influence in proportion to the lower faculties of his nature. Consequently, the desire and ability for seeking a higher, a nobler, and purer life, grow weaker and weaker, and the tendency *downward* stronger and stronger.

There are a few great general facts, estab-

ded by experience, observation, and actual statistics, showing the effects of alcohol upon the human system :

1. It is well known that this poison is productive of certain diseases, and that there is always much more sickness among those accustomed to its use, and that neither skillful treatment nor good nursing nor hygienic influences relieve such persons as they do the sick who are in the habit of using it.

2. The rate of mortality has been ascertained, both in Europe and in our own country, to be greater with this class, so much so that some insurance companies will not receive applications for life insurance from such persons on as favorable terms as from other parties.

3. It is also established by statistics that about one-quarter of all the insanity existing is caused, either directly or indirectly, by alcoholic drinks.

4. More than one-half—to say the least—of all the inmates in criminal, reformatory, and other institutions have had their systems, physical and mental, injured more or less by this poison, and to this source, more than to any other or all others combined, may be attributed their relegation to these places of confinement, dependence, and degradation.

Now, if alcohol, as these facts indicate, has such a powerful influence over human organization and destiny, what agency does it have or perform in respect to the *preservation* and *propagation* of the species? A correct and complete answer to this inquiry is, we need not say, one of vast importance. What, then, is the law of human increase, and *how* or in *what way* does this poison violate it? This law of increase is one of the great fundamental laws or first principles incorporated into the very nature of man at his creation. When he came from the hands of his Maker, with a perfect organization—which was pronounced “very good”—he was commanded to “be fruitful and multiply, and replenish the earth.” And, notwithstanding by a course of disobedience and rebellion he lost the moral image and likeness of his Creator, as well as that harmony and perfection of physical organization with which he was created *that law of increase still remains*, and is based upon the same great physiological standard. Without attempting here to explain the nature and foundation of this law, or present the various evidences in proof of it, together with the conditions of its application, we proceed to point out one of its conditions, which is all that is really essential for our present purpose—that is the law of *heredity*.

This law of hereditary descent is one of the most important laws imposed upon our race, or that has been developed in its history, though, unfortunately, it is not generally understood. The most profound physiologists in all ages have maintained that, in some sense, there was such a connection between the parent and child as to show a likeness or resemblance, and the best judgment or the good sense of the common mind has generally admitted the same fact. But the proverb that “like begets like” has a far more extended application than what has generally been conceived. It does not refer merely to the size and form of the body, the features of the countenance, the complexion of the skin, and the strength of the system, but extends to the minutest parts of all the organs and their functions, whether external or internal. Did our present limits permit, a long list of distinguished names, together with a great mass of evidence, might be adduced in proof of this statement, but the testimony of only two or three writers must suffice. Says Dr. James Copeland, one of the highest authorities in all physiological or medical matters in Great Britain: “It is generally observed that the constitution, the temperament, and diathesis of the offspring closely resemble the parent; and that whatever disposition to disorder, whether of structure or function, the latter may have possessed, it is liable to evince itself in the former.” Sir Henry Holland says: “If peculiarities of external form and feature tend speedily to become hereditary, affecting, as we see on every side, not families alone, but, by intermixture and descent, whole races of mankind, we have no doubt that deviations of internal structure (whether they be of deficiency or excess or of any other nature) are similarly transmitted, and, with them, propensities to or conditions of morbid action in the parts thus organized.” The writings of Owen, Huxley, and Darwin—perhaps the most distinguished of any three men in science at the present day—corroborate fully these statements.

Let us now make an application of this law of hereditary descent in cases of alcoholic poison; and, first, what is the testimony of competent witnesses upon the subject. Says Aristotle: “Drunken women bring forth children like unto themselves;” and Plutarch writes that “one drunkard begets another.” Shakespeare, Burton, and others, make similar statements.

Dr. Caldwell, the most distinguished writer on physiological subjects in this country, says: “By habits of intemperance parents not only degrade and ruin themselves, but transmit the elements

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not copy a Pawnee lodge in the tenements which he raises in cities by the Delaware or the Hudson. Even the defenders of the patriarchs, who find divine wisdom in the words and acts of Abraham and Isaac and Jacob, and hold to the cosmogony of the Hebrew Genesis, will not fasten their practice to the house-building of the patriarchs, or content themselves with such a dining-room for their guests as that in which the Father of the Faithful entertained the angels. In the matter of home convenience, the profane way of Greeks and Romans will be preferred to the nomad ways of the first people of the Lord.

The savage houses are not so good as the civilized, yet the savage houses have some good hints which the civilized may profit by in the way of ventilation and adaptation. The houses of civilized men might be improved by returning in some particulars to the primitive style. There are some things which give a log-cabin an advantage over a six-story house in Broadway. It has less noise, more light, and an easier communication between its rooms. It is more comfortable, on the whole, and safer, in the case of earthquake or fire, to live on the ground floor of a cabin than in the attic of a tall hotel, even if one is pulled up by an elevator. There is a deal of cheating in all city palaces, with their marble and freestone fronts; and the tired artizans and clerks, who have to climb every night to their lair, pray for the time when they may have a cosy box in the suburbs, and be saved from this daily trial of muscle and breath. The very splendour of the Fifth avenue mansions makes them a burden and a misery, from which their owners are glad to run, even to the equal misery of a summer watering-place. Long Branch and Murray Hill have in their house "apparatus" as real an exasperation as the dens of Mulberry Street, swarming with children and redolent of filth. Probably the wretched families of tenement houses complain less of their annoyance than those who dwell in costly houses, yet find that there is something wrong in the contrivance for which they have paid so much money—that the warped doors will not shut, that the narrow flues will not draw, and that they can not make the doors or the windows burglar-proof, or sleep quietly in their beds.

We will notice some of the essential points of a wholesome house, beginning with the lowest part, with that which is underground. Every house which a civilized Christian man is to live in ought to have a *cellar*. A Gothic church may be built upon the ground, with no excavation

under it; but if a Gothic house is to follow the rule, then it is an abomination. No house should have the beams of its floor laid upon the damp ground. Not merely for convenience as a store-house, but for simple sanitary use, a good cellar in a house is as important as a good parlor or library. And this cellar should be at once airy, dry, and reasonably clean. It should be lighted by something more than one or two gratings. It should be cemented beneath and around so carefully that no leak from the soil can penetrate it. It should have a free circulation of air that is not mephitic. It should be swept from time to time. It should be made proof against roaches and rats, and should not be allowed to hold any offence to decency. A cellar which is dank, clammy, mouldy, cobwebbed, choked with rubbish, holding water after every rain, which forbids delicate feet from entering, and has the tone of a tomb, is not fit to be under a Christian house, even if prayers are said regularly in that house and the Bible is diligently read. Dwelling over such a miry hole, the man who reads about the "slime pits" in the vale of Siddim must feel that the Sacred Word rebukes him. The germs of acute and infectious disease are in that hiding-place. A spacious, dry, sweet cellar is the fundamental need of a house in which the sound mind is to be kept in a sound body; a cellar in which vegetables may be kept, as well as coal and cinders; in which the laundress shall not fear to ply her task, and to which a student may go for shelter from heat on a summer's day, without risk of bringing away a cough or an ague. Less expense in painted ceilings above, and more heed of the cellar wall and floor, would be good economy in house-building.

Yet we must be allowed to protest against the use of cellars as chambers, or eating rooms, or kitchens. Drinking and gambling saloons may justly burrow in the ground, and hide themselves in subterranean haunts. But a cheerful table ought to be above ground as much as a cheerful church. In times of persecution it may be lawful to make chapels in catacombs, and in bombardment it is certainly easier to eat in vaults; nevertheless, we should choose in time of peace to have our tables spread on a level at least, if not above, the surrounding landscape. A gross wrong is done to servants when they are compelled to make the cellar their home, even if it is dried by the fire of their range or the flame of their ever-burning gas jets. The lofty dome of a Church of All Souls can not compensate the outrage which sends down to such a crypt the servants of its

personage. The part of the house in which its work is mostly done, and in which its social life is kept, should be above ground. It is more philosophical, indeed, to have the kitchen in the attic than in the cellar—in the part of the house from which steam and odours most readily escape; and some of the larger business houses are adopting that plan. The food and drink which come down warm and fragrant from these lofty larders will be more apt to seem as nectar and ambrosia, than food which comes up from the depths.

This passage from the cellar to the attic leads us to say something of the roof of the house, and what its upper part should be. In some latitudes, where it is desirable to go up often upon the top of the house, in Egypt or in Syria or in Greece, flat roofs are well enough and have their advantages. But in our American climate, where there is much snow and more rain, flat roofs are wholly unsuitable, apart from their ugliness. Our houses need a room above to aid in their ventilation, as much as a dry room beneath their lowest floor. The Mansard roof, which is now so much in fashion, grotesque as it is when fastened upon some squat cottage, like the bill of the pelican upon his awkward body, is yet a great deal better in our winters and our summers than the flat roof that permits no garret. There should be a space above the rooms in which the family live, which may serve as a safety valve to the house. The garret is not put to good use when it is cut up into many small chambers, each with its single window, in which the children and servants of the house may be roasted or frozen at night, as the seasons change; but when its broad space is left free under the sloping roof, to be a play-room or a store-room, always accessible and easily opened. An air-tight attic shuts and seals the house in a very disastrous way. It must allow the foul air to flow out as it floats upward. All the contrivances for making the roof impervious to moisture, the sheets of pasteboard, the plaster, and the pitch, and the tin, only make openings more necessary, only make it more necessary that nothing should obstruct the movement of the air. The best economy will leave the garret free, unless it shall be turned into a billiard-room, and used for an hour or two at evening with the windows opened.

Higher even than the attic story of a house are, or ought to be, its *chimneys*. The new ways of heating houses, mischievous as they are in many respects, have not altogether abolished chimneys, though they have reduced these almost to their lowest term. The Chimney

Corner, as the title of a household journal, is a joke, which the children have to go to a dictionary of obsolete phrases to find explained. Those grand chimneys, massive and broul, with their vast flues, up which the sooty urchins could climb and sing, and through which the fire of the great logs roared, are a fading tradition now in American homes. Half of the chimneys which now decorate the lines of the city and country roofs are "dumries," fastened there for symmetry, as innocent of all value as the "Quaker guns" of the Rebel Army. Nay, once in a while, we may see a house which honestly refuses to lift a lie of this kind, and shows no chimney except one small flue upon an ell in the rear, to carry the smoke of the cooking-stove and the portable furnace. Many houses there are in which the chimney has no communication with any room, and is only an escape-pipe for smoke. In some houses, where there was once the open fire-place, the opening has been filled up, and the gay paper hides the gaping chasm that broke the even wall. Not a few have studied and planned how to get rid of chimneys and flues, especially since "registers" for the walls have been invented, which are to carry off the superfluous gases. The mantel stays, awkwardly bracketed upon the wall, but the hearth is gone, and belongs only to poetic legend.

The change from the former arrangement is not happy or wise. A furnace in the cellar may be good to take the chill from the house, and to heat its halls and passages, but it ought not to supersede the fire-place in parlor and chamber, at once the ventilator of the room and its centre of cheer and joy. No apparatus of ventilation has yet been devised equal to the old-fashioned chimney. Even when no fire is made in the aperture, this avenue to the open air draws its currents and keeps the atmosphere pure. Where there is no open fire-place, no free flue, there will be sense of asphyxia in those stormy nights when the windows must be fastened close. Every room in the house which is used to sit in or to sleep in ought to have a sufficient opening into the chimney, larger than the orifice of a stove-pipe. No matter if the heated air escapes by it; it is better to lose half of the heated air than to be breathing stagnant air that is already deprived of its oxygen. In the spring and autumn the fire-place, with wood on the andirons, gives all the heat that will be needed, and gives it more gracefully than the blasts from any "registers." In a house without chimneys it will be impossible to get the home-like feeling, as much as in a hall or a

barn. And the substitution of radiators for chimneys, however gilded and quaint their surface may be, is only to bring the style of a prison into the freedom of the family circle. A first care of every well-constructed house will be that its chimneys are numerous enough and large enough and tall enough to keep the circulation of air active throughout the house, and to call away its smoke and its miasma. They add to the beauty of the house more than its finical turrets and pinnacles, which have no use.

The size of the rooms in a house has very much to do with the health of its inmates. Love in a cottage is all very well, but it will end in dyspepsia or consumption if there is not ample space for health and motion. Other things being equal, high rooms are better than low rooms, large rooms than small rooms. Especially absurd is the mistake of reserving large rooms for occasional visitors, while the work of the house is done in its small rooms. The sleeping chambers which are most used ought to be spacious enough for a promenade in dull weather, and it is a wretched mistake to limit their dimensions to forty or fifty square feet. They are meant to hold air for a human being, and not merely to hold a bed and a pair of chairs. The library, in which the master of the house and his children study, ought to be more than a closet fitted with book-shelves and a table. To call such a cell a "sanctum" is only to repeat the old monastic libel on holy things. These cramped corners in the house may be cosy and easy to be cared for, but cosiness is poor compensation for free space. The man of whom Mr. Emerson tells in his lecture, who did "not want to swing a cat," and was contented in his nook of three feet by six, ought to be a carping and cynical critic, vexed by devils. The sitting-room, the study, the kitchen, the occupied chambers of a house, should be its largest rooms. The rooms that are opened rarely, or used only for short interviews, ought to be inferior in space, as they are in use. No absurdity can be greater than that of leaving a large chamber untenanted, in reserve for guests who rarely or never come, while the children of the house are hived in narrow alcoves which seem only fitted for a race of pigmies. A small house with large rooms is much more respectable than a large house with small rooms; the log-cabin of Iowa is a better type of a Christian habitation than the Franciscan cloisters of Italy. The excuse of the cells in a penitentiary is that the cells are all needed, and that the occupants are doomed to woe.

The position of a house, too, affects very much

its sanitary value—how it fronts, where it stands, and what are its surroundings. If the house stands free, and is not pressed into a "block," of course one side of it will face the north, and one side will face the east. But we may say that, even when there are windows on all sides, and the light comes in from all sides, the rooms most used should be where they can receive the direct rays of the sun at all seasons. Sunshine in the rooms is just as salutary as sunshine in the fields or sunshine in the heart. Let the carpet fade, let the flies come in, but do not keep out the sunlight. A house that has no sunshine will be half of the time a hospital, and a bad hospital, too, where there is more malady than cure. A healthy house will not be placed where any thing obstructs the light. It is not commendation that one can gather his apples from his chamber-windows, or can study pine cones on the tree without leaving his chair. One would not cut down a great elm or oak because its spreading branches have reached the windows or the roof. But when the shade is sombre, and the sun refuses to pierce its canopy, the house itself ought to be moved into the light, or another built in a better place. As a general rule, we may say that no tree of any size ought to stand within fifteen feet of a house, and no shrubbery that will make any of the rooms dark or damp or dismal. There are reasons of health, not less than of beauty, why a house should not be hidden in a grove, and why a lawn with flowers is more satisfactory than clumps of pine or cedar.

A dry site for a house, too, is of the highest importance—that there should be no marsh before the windows, no stagnant pools around the doorway. The margin of a pond is not a proper site for the dwelling of a prudent man, however it may suit such a genius as Thoreau. The best landscape is not a fair equivalent for the danger of malaria. A well-drained city street is better for residence than a house which looks proudly down upon the bay and the islands, yet draws in poison from damp lawns and pastures. It is said in the Scriptures that the evil spirit walks through dry places, seeking rest and finding none. But the good spirit, the spirit of soundness and health, chooses the dry places, and finds the air there very genial and quickening.

There are more marks of a wholesome house that ought to be mentioned—plenty of closets, to hold articles which would gather dust; a good bath-room, where the members of the household can make themselves clean from head to foot; the culinary process so adjusted

that the steam and the odours will not pervade the halls and chambers; the windows so arranged that they can be dropped from above as well as raised from beneath; the out-buildings clean and commodious, and easy of access; the paint, both within and without, of a kind which flagues none of the senses; the tints harmonious and light, not suggestive of melancholy or gloom; the stair-cases easy to mount, not steep and narrow; the central hall broad and open to the passage of air—all these things are to be considered in building a comfortable house. To these things decorations and mere

æsthetic appendages must always be secondary. Without these things, a palace is deceitful and a snare, and is not fit to live in. Another question, not easy to decide, is whether the healthy house ought to have a verandah around it or on one of its sides. In warm climates this is a convenience, good for day and evening. But in regions where winter rules half the year, it is doubtful if the "piazza," as it is queerly named in the popular dialect, does not harm the house, by hindering the light, as much as it brings comfort in the heat of summer. We have no room to discuss the problem here.

At Sea with the Mormons.

FROM THE NOTEBOOK OF A GENTILE TRAVELER.

BY MRS. E. E. EVANS.

THE return voyage was a unique experience for most of us, I think.

On the third day out I was able, for the first time, to leave my state-room and visit the ladies' cabin. In passing through the saloon I met a lady acquaintance, who said to me: "You will find a Mormon lady in there; about half the cabin passengers are Mormons, and there are six hundred of them in the steerage!" This was news indeed, and it was with a feeling of curiosity that I opened the cabin door. A middle-aged lady, well dressed and with a fair, frank countenance, sat by the open window sewing. She looked up as I entered, and bowed politely, with a few words of condolence upon my prolonged misery. There was a kind-hearted tone in her greeting, and with it an air of good breeding that interested me, and our intercourse became friendly at once. After a few remarks on general subjects, I said to her directly: "I have been told that you are from Salt Lake City—is it so?" She replied that it was, and I continued: "And are you also a Mormon?" She again assented, a I told her I was glad of the opportunity to talk with one who really understood the system and believed in it, and I hoped she would excuse me if I asked a great many questions. She expressed her willingness to give me all the information I desired, and from that time our conversations were frequent and earnest, and while each maintained decidedly opposite views with spirit and fervor, no offense was ever taken by either. She told me once that she was greatly pleased with my

manner of addressing her at our first meeting, as strangers were apt to show their hatred of the institution by contemptuous treatment of individual members. She had suffered much rudeness from her fellow-passengers on her voyage to Europe, after they discovered that she was a Mormon, though previous to the discovery they had showed her many marks of friendship, and had appeared to enjoy themselves in her society.

She was certainly a woman deserving of respectful recognition wherever she might be. All her words and actions showed that she was intelligent, affectionate, and generous, and as "to the pure all things are pure," it was evident that Mormon ideas had exercised no corrupting influence upon her mind. I was particularly struck by her modesty and delicacy of feeling, because, in the discussion of social questions, we often entered upon topics where the line between earnestness and coarseness, though well defined, is very narrow, and she was careful never to transgress it.

There were only six lady passengers on board, and we spent much of our time together in the private cabin. The conversation was chiefly upon Mormonism, as was the case, indeed, throughout the steamer. In the steerage were several hundred old men and maidens, young men and children, who, coming from the smoky air and excessive labor of the great manufacturing towns of England, and going, as they supposed, to a life of ease and prosperity in a land flowing with milk and honey, were enthu-

siastic concerning the new way of salvation, and sang the songs of Zion with unwearied zeal, and in tones that rose above the roaring of the wind and the dashing of the waves.

In the cabin, Mormon books lay scattered about for the casual benefit of the unconverted, and Mormon brethren were ready, in season and out of season, with a word of explanation and exhortation for all who would listen. Although I made no acquaintance with these men, preferring to gather my information from the lady of their party, I saw a good deal of them and their ways, and heard many of their conversations. None of them appeared to be men of liberal education. Their language was far from choice, and their tones entirely uncultivated. Some of them showed marked defects in matters of table etiquette, and all were characterized by an awkwardness of manners which we observant Gentiles were swift to attribute to absence of the proper influence of woman in their home society. Such faults and shortcomings were the more noticeable because these men were possessed of wealth and position, and were, most of them, missionaries sent out by Brigham Young as especially fitted for their task. For the rest, they were quiet and civil; they adhered to the old rule of "Early to bed and early to rise," drank wine but seldom, and then in very small quantities, and set a good example, as well as presented an agreeable contrast, to certain gay young men who killed time for themselves, and murdered it for the rest of us, by late wine suppers, with accompanying foolish jests and unmeaning songs.

One evening, after the captain had kindly aided in dispelling the *ennui* which is a sure attendant upon a sea voyage by an hour's excellent reading, in a remarkably fine voice, the Mormons, wishing, probably, to contribute their share to the entertainment, began with one consent to sing a song recently composed by a fellow-citizen, and adapted to the popular air of "Marching through Georgia." They must have been astonished at the enthusiastic cheers, and the *encore* which would not be denied, as well as at the continued popularity of their ditty; for, though after that evening they could never be induced to repeat their performance, the chorus could be heard, from profane voices, at almost any hour of the day or night, for the rest of the passage. The words are significant, as will be seen by the following verses:

"Who'd ever think that Utah
Would stir the world so much,

Who'd ever think the Mormons
Were loudly known as such!
I hardly dare to sing about
Or such a subject touch—
For all are talking of Utah.

CHORUS.

"Hurrah, hurrah, the Mormons have a name;
Hurrah, hurrah, they're on the road to fame;
No matter what they style us, 'tis all about
the same,
For all are talking of Utah!"

"'Tis Utah and the Mormons
In Congress, pulpit, press;
'Tis Utah and the Mormons
In every place, I guess;
We must be growing greater,
We can't be growing less—
For all are talking of Utah."

Chorus.

This song is more practical—not to say belligerent—than most of their productions.

There was frequently an evening prayer-meeting in the Mormon part of the steerage, when the hymns that rose to our ears were of a devotional kind, full of praise of the earthly Paradise at Salt Lake, and of yearnings for the heavenly Zion that should be the portion of the Saints for ever. On two occasions a select company of these zealous singers gave a concert on the upper deck for the benefit of the cabin passengers, when the pieces were of a lighter character, and better suited to the general and Gentile taste. As a great privilege, I was allowed to read two or three poems by Miss Eliza Snow, held in great veneration by her sisters as an inspired poetess, and as the (solely) spiritual wife of their prophet, priest, and king, Brigham Young.

I looked into the Mormon books occasionally, but found them such a tissue of visions and rhapsodies, mingled with convenient extracts from the Scriptures and illogical homilies, that I soon became wearied with my search for the definite basis of this anomalous system.

In short, the Mormon lady was my sole dependence for information, and the following statements are a condensation of her numerous disclosures:

In the first place, her personal history was interesting. She was a native of Ireland, and was educated and married there. Her husband was formerly a Methodist minister; they had both joined the Mormons from conviction, and had now been with them seventeen years. She

had always lived happily with her husband; they had raised nine children, two of whom were now married, and a grandchild had been added to the flock during their absence. Her husband had never married another wife. But when I gave him great praise for his fidelity, she replied, significantly: "I know how much that is worth," and proceeded to tell us that he had twice made an offer of marriage, but had been refused in both cases. When I said that she could scarcely judge of the evil effects of the system, as she had never suffered from them personally, she replied that though she had not had the actual experience of living with other wives, she had known that her husband's affections were not settled entirely upon herself, and had consented to share her home with others.

Upon close questioning she admitted that there were often jealousies and heart-burnings on account of this legalized infidelity on the part of the husband, but said that what reconciled herself and her sisters in the faith to such a state of things was their firm belief that the command had been given by divine revelation, and that in proportion to their trials here, and the success with which they repressed their natural impulses would be their reward in the world that sets this one right. This was a rather different view from that taken by one of the brethren on board, who, in his efforts to convert some of the officers of the vessel, had described the acquisition of each new wife as "a burst of glory upon the soul," a phrase which at once became popular among passengers and crew, and was often employed in a most incongruous and ludicrous manner.

Polygamy (she declared) is preached and practised in Utah for the prevention of two great evils—namely, prostitution and the deterioration of the race. There is no such thing as a brothel in their community. Young men are encouraged to marry early. Chastity is as precious to the Mormons as to any other people, and is far better protected among them than elsewhere, the denunciations against its violation, and the punishment prescribed for the possible committal of the crime, being the severest in their code.

There are great blessings promised, both on earth and in the future state, for the man who cherishes many wives and begets many children; but the majority of the faithful have but one wife, either their limited means or their doubts as to their ability to manage a heterogeneous household preventing many from becoming candidates for the highest prizes of sainthood.

Every woman, say the Mormons, is entitled by nature to the privileges and blessings of wifehood and motherhood; but under the prevailing system of society many women fail to complete their destiny. Not only do false customs condemn a large number to a single life, but in every quarter of the globe there is an excess of female births, showing that Nature herself advises polygamy. It is true that the invasion of the home by a second wife, to say nothing of later accessions, is a violation of natural instincts in all concerned, and a fruitful source of unhappiness. But faithful Mormons will remember that they are called to a higher than the natural life, and the peculiar trials of wives, as well as the additional cares and burdens which accrue to the husband through the increase of his family, are to be regarded as a wise discipline, developing meekness and patience for this mortal state, and capacity for the highest enjoyment in the kingdom of final reward.

Now the mischief of this system is that there is a leaven of truth mingled with its mass of falsehood—a speck of wisdom, like a grain of salt, delaying the process of its corruption. And no doubt many of the Mormons, both of the leaders and the led, have accepted their theory through disgust at the vices of a world which seemed to them incapable of reformation, and have consented to exemplify it in practice from a sincere desire to build up a social order which shall be free from those special evils—namely, drunkenness and licentiousness, which have been so far the unfailing attendants and curse of large communities in every quarter of the globe, and under every form of political government and religious creed.

Their recognition of the importance of prenatal education, and the welcome given to every child born among them, are a reproach to our civilization, wherein not only culpable ignorance and selfishness concerning the natural laws of parentage are prevalent, but our principal newspapers publish advertisements of agents, both human and medicinal, for the murder of unborn children. But, on the other hand, it may be doubted whether the physical liberty granted to Mormon wives and mothers is all that is wanting to insure superior offspring. To say nothing of the necessity of physical, mental, and moral health in the father, it would seem that the feeling of degradation which must accompany the position of woman under such a system, the comparative lack of intellectual training which must be the result of the need for constant manual industry, and

of complete isolation from the educational advantages of older and less bigoted communities, and the constant chafing of the feminine spirit under the burden of outraged delicacy and unappreciated affection (for to suppose such emotions lacking is to allow that Nature in these instances has taken her revenge in the destruction of woman's holiest impulses), were a poor preparation for bestowing a beneficent impress upon the new-created soul.

Again, though the success of the Mormons in preventing licentiousness within their borders is apparently a great advance, it is not really so when we reflect that the best morality consists not only in outward decency, but in such discipline of our complex nature that the higher powers of the intellect and soul shall have dominion over the lower instincts and keep them in due subserviency. Polygamy may take away in some degree the sense of shame and guilt that troubles the secret offender against purity; it also provides for the recognition and maintenance of all offspring, but it does not strengthen the soul for victory over the flesh, and it sinks the development of the individual in the interests of the family and the State.

The absence of drinking and gambling saloons in Salt Lake City is another deceptive triumph, which has thus far depended more upon the strong will of the chief ruler, and the great distance from temptation, than upon the self-control of the people.

The industry of the Mormons is, at first sight, an admirable feature in their character. They are proud of their chosen emblem of the bee-hive, and fond of calling themselves "the Hive of Deseret." Industry is, in truth, a great virtue, but it saddens one to think of the labor expended in the beginning to redeem the desert valley of Salt Lake, and constantly demanded to prevent its relapse into aridity, when, but for their fanaticism, these people might be developing with ease the resources of a portion of our yet unoccupied fertile territory. Nor is it pleasant, in these days of machinery and associated labor, to hear of women spinning and weaving the cloth required in their households, especially when we know that it is not necessity, but policy, that keeps them absorbed in these material occupations to the sacrifice of higher pursuits.

And, indeed, with the best of opportunities, how could this strange people ever bring their ideas into sympathy with what are for us the most delightful subjects of study and contemplation? How can Mormons read history intelligently without condemnation, when history

is the record of the gradual progress of the race toward liberty, while they have of their own accord returned to bondage? How can they enjoy the master-pieces of fiction, when these depend for their chief interest upon the skillful portraying of the passion of love as lavished exclusively upon one object? How can sculpture, painting, music, and poetry appeal to the ideal in their souls, when they are trying to drown the sweet voice of Nature by the harsh commands of a supposed revelation? What tender associations of home and childhood can belong to the members of these mixed families where the father's notice and affection is too much divided to exert any salutary influence and the sacred privacy of each group is sacrificed to the interests of the united crowd?

The statement that polygamy is indicated by the excess of females in all ages of the world though plausible within a short range of observation, is contradicted by the sure test of statistics; and even in Utah, where Nature is constantly aided by immigration, there exists at this early day in their history, the best reasons why the majority of Mormons have but one wife.

In view of all that the past teaches, that the present is accomplishing, and that the future promises, it must be that Mormonism will perish of its own decay within a not very remote period. A system resting upon the authority of a recent revelation, itself the echo of a primitive social order; a system which defies the law of the land and the advanced public sentiment of this age; a system which goes back to the "one-man power," from which idea the rest of the world is escaping, and joins to political subjection the most abject consent to gross superstition; above all, a system which, in this period of the increasing development and enfranchisement of woman, is intent upon degrading her lower than she has ever been degraded before in nations nominally Christian. Surely the cause of progress has nothing to fear from such an enemy!

Complete isolation has hitherto preserved this anomaly among human institutions longer than its comparative strength would warrant; but now a highway has been opened through the desert, and we have good reason to trust that the infusion of liberal ideas, which are sure to follow in the wake of mechanical improvements, will gradually accomplish what force, though apparently more effectual, would only be able to repress for a time, since nothing but knowledge can really conquer error.

Baby's Bath.

BY EDGAR FAWCETT.

I THINK there never was so brave a baby,
 In all the realms of babydom, till now.
 He positively looks upon cold water
 As something quite enjoyable, I vow.
 The little pink-limbed atom of perfection!
 Just listen! how melodiously he coos,
 And reaches for the sponge mamma is holding,
 As if she only meant it to amuse!

His playful hands are blithely dropp'd and lifted,
 Like playful peach-blossoms in some merry breeze;
 And oh, it is delight to watch the dimples
 That deepen if he bends his chubby knees!
 Then, too, his low, soft laughter, never silent;
 His eyes, more beautiful than evening stars!
 Were only other babies half as docile,
 What comfort for a million poor mammas!

And when his bath is ended, and I sing him,
 Rocked in his cosy cradle to and fro,
 All gently, like the waving of a poppy,
 The sweetest of the lullabies I know,
 How willingly his eyelids yield to slumber;
 What peace on dewy lips and pearly brow!
 I think there never was so dear a baby,
 In all the realms of babydom, till now!

Woman.

SHOULD she, who shrinks from giving pain,
 E'er seek her food among the slain?
 Her life sustain on slaughtered brutes,
 Instead of earth's delicious fruits?
 First wring the kindness from her soul;
 Let selfishness her heart control;
 Distort her pure and gentle mind,
 Then make her coarse and unrefined;
 Let love to cruelty give place;
 Her matchless attributes efface;
 Nay—fashion her throughout afresh
 Before you let her feed on flesh.—*Edited.*

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

MAY 29, 186—.

HERE I am at *home*, my new home, the place to be, perhaps, all my life my abiding place. I hope so, for that is a beautiful thought to me of commencing and ending our married life in one and the same place. I am going to keep a journal, which Henry and I shall read on each anniversary of our wedding. My most important reason for this is that I wish to test some fine theories which I have held for a long time. One is, that husband and wife should never have any difficulty; another, that much of the trouble with servants arises from the want of right management on the part of the mistress; another, that a physician's wife should look upon herself as directly interested in her husband's patients, and, when occasion offers, should actively do for them.

These are enough to begin upon, and a year's experience ought to go far in proving their correctness or incorrectness.

I must review the events of the past few days, for, without these, my journal would be incomplete.

We were married Wednesday afternoon, the 24th, in the little church at Burtonville. Afterward, as we stood in front of the church receiving the congratulations of our friends, we learned that there had been a great many spectators, but I knew nothing of it before.

I had resolved to think as little as possible of my surroundings, and was so far successful as to have no thought but of the beautiful promises we were making. The day had been cloudy, and, at the commencement of the service, the light in the church was quite dim; but, just as our hands were joined, there was a burst of sunshine through the west windows, which flooded the whole church. It was pleasant to think that our life might be like this, dimmed, at first, probably, by our struggles with surrounding circumstances and our own stubborn natures, but lighted up at last. It will be our fault if it is not so.

Cousin James played the organ so beautifully! I had asked him not to play any grand, noisy march, the fitting music for those who expect to spend their lives in the gayety of the world, but something more in harmony with the probable tenor of our lives. I knew that would understand me, and that, with his

keen sensibilities and power of intuition, could interpret my wishes, and he did so perfectly. As we entered the church, the music was joyful but solemn, full and rich; as we left, we seemed to hear in it the song of birds, the ringing of flower-bells, and something telling of home, love, and peaceful happiness.

Our congratulations were quite varied. The two most marked to my recollection were those of Mrs. Lane, our minister's wife, and Mr. Fiddler. Mrs. Lane said to us: "I hope you will have a very happy life"—the words simple, but, from her, meaning a great deal. George Fiddler's congratulation was just as earnest and well-meant, but must have been amusing to bystanders: "Well, now, ain't it nice I told Samsoel that we must come to *your* wedding, even 'ft did take him out o' the 'tater field and he wanted to come just 's much as I do. I 'xpect you'll have a dreadful nice life of it for Henry's a surprisin' fine man for one of his age." I should not omit Aunt Joanna's characteristic remarks, for they could hardly be called congratulations. "So you are really married! Well, all I have to say is, don't expect perfection of your husband. It is likely that he is any better than other men, but the best of them are not good for much. There was nothing but joy at our wedding; even father and mother, knowing the short distance of Lightwood from Burtonville, did not feel as if we were parting. We drove over to our new home late in the afternoon, arriving just in time to have our supper before sunset. The evening we spent in talking over our mutual plans. Henry is afraid that, in spite of his having so many warm personal friends at Lightwood, his new views of medical practice may interfere with his immediate success.

He is fortunate in having the means to live plainly without depending upon this source of income, and can therefore bide his time. He was at first inclined to laugh at my theory of a physician's wife having any further responsibility than any other woman, but I succeeded, in partly, at least, convincing him that it was well for her to take certain duties upon herself toward some of those whom her husband should be summoned to visit as patients.

We had no help until the following day, when

one of Henry's friends kindly sent us a young colored girl, who, I fear, from my short experience, will afford us more amusement than assistance. She was brought up in a Southern family where there were a good many children, of whom she had the charge latterly. She seems to think a family incomplete without children. Emboldened by her feelings, she said to me to-day: "I wish, Mis' Sanborn, you'd 'dopt a child; I'se drefful lonesome without my chillen." What she does she does well, but she is so perfect a Topsy that I am afraid she can never be trained to be a reliable servant.

This morning I left her to sweep and dust the parlor, while I went up stairs to arrange some closets. Hearing a noise in the lower hall which I could not account for, but thinking it must be Eliza, I opened the door softly and peeped over the balusters, just in time to see my Topsy trying some light gymnastics. She was endeavoring to balance herself upon her stomach on the large pillar of the balusters at the foot of the stairs, and was so earnest in the execution of the feat that she did not notice me. After several unavailing attempts she succeeded, and a most ludicrous object she was, with her hands and feet outstretched, and her woolly head bobbing about in her satisfaction. One bob too many threw her forward so far that she fell upon the hall floor with a great noise. She jumped up with the exclamation: "Good 'nuff for you, you lazy niggah; just g'long back to yer work!"

June 15.—We have spent our mornings for the last two weeks in arranging the rooms in our little home, and in work about the flower and vegetable garden.

There is no immediate danger of Henry's health being broken by overwork in the line of his profession. Patients come slowly.

We have received a great many calls—so many that my impressions are quite indistinct of the people who made them, with the exception of a few who were noticeable for some peculiarity of look or manner. As soon as there is a pause in the rush we shall commence returning calls, and then I shall begin to know the people better, seeing them in their own homes, a few at a time.

Henry told me last night that he had found an opening for me to put one of my theories in practice. He has an Irish family, about a mile from the village, who are nearly all sick. There are a great many around them, but they accomplish nothing but to get in the way. My

Topsy has made acquaintance with a neighbor's baby, and, with my permission, has had it in the kitchen two or three times for company. Instead of distracting her attention, the baby has a subduing effect which is very curious to notice. Eliza must be a nurse by nature. She has the baby this morning, and I have, therefore, perfect confidence, in leaving her, that dinner will be punctually ready when we reach home.

Friday, June 16.—When we arrived at Patrick Donovan's yesterday we found the room full of people, Mrs. Donovan in her bed, and three children in different stages of illness—one in bed with its mother, and two in chairs. There were four Irish women in the room, doing nothing but fill up the room and exhaust the air. I felt like making a raid upon them at once, but knew that this was not the way to commence; so, after saying a few words to the sick woman and children, I entered into conversation with the women, finally making way for the remark, which I had been meditating ever since I entered the house and glanced at its construction: "Mrs. Donovan would be much more comfortable in the next room, where it is cooler and she would not see so many persons."

"Faith, an' it's the compan-y that she wants, poor woman; it's all the comfort the poor soul has." By a little quiet talk I convinced them that she would really be better off if moved; and, with Henry's assistance, we soon had things much improved. Two hours work in just those little things that every woman ought to know how to do, made both children and mother more comfortable. It was pitiful, to me from my fresh, sweet home, to see those little children lying there with dirty faces, and bodies looking as if they had never known the use of water. After we had moved the mother, I had the direct draught shut off from the children, and then washed them, a little at a time, with soft, warm water. No clean clothes could be found for them, but the washing made them look and feel more comfortable. Henry said, as we drove away: "I am inclined to think there is something in your theory, Annie. I had been disturbed by the dirt and want of comfort at the Donovans, but I did not see how to remedy it. If I had told those women to clean up, they would have made such a disturbance as to make Mrs. Donovan, in her weak state, excited and worse; and, if I had directed them to bathe the children, they would probably have plunged the sick little creatures into

water of one or other extreme of temperature which would have given them a chill, and counteracted all the good which I might previously have done them. Then, if the children had died, the doctor would have received all the blame. If nothing very outrageous is done before my next visit, I shall expect to find all the sick ones better."

July 1.—The last three afternoons of last week we spent in making calls, and I begin to feel acquainted with our neighbors. Last Sunday, at church, I recognized them all by name and looks, quite an improvement upon my experience of the previous Sunday, when Henry had to tell me the names of so many whom I had already seen.

It struck me as curious to see so many women in some of the families, many of them elderly and unmarried, and it would seem as if the church were built specially for them. It is arranged in long pews, capable of seating eight persons. I noticed seven families of maiden sisters, of from two to six in each family, fling into these pews, and my sense of the ludicrous made me *feel* a smile, and think of the not quite appropriate nursery rhyme :

"Mary, Mary, quite contrary,
How does your garden grow ?
Silver bells and cockle shells,
And pretty maids all in a row."

I also saw a number of unusually pretty young ladies. I wonder if the maidens in rows were ever as pretty.

Dr. Hutton read the service very impressively, as if his whole heart were in it, and Henry says that my impression is correct—that he is a very earnest, good man, and possessed of considerable talent. His sermon was short and simple, but just one of those that one hears without any effort, and feels. One of our calls last week was at Dr. H.'s house, but we did not see him as he was out. He greeted us very warmly after church. After speaking with me a few minutes, he laid his hand in a familiar way upon Henry's shoulder, and said : "Well, Doctor, you must bring the wife to see us very soon. Come to-morrow to tea." And so it was arranged. I looked forward to it, until the time came, with as much pleasure as a child ; for I had heard that his wife, though so much of an invalid as to prevent her going out often, was a lovely and lovable person, governing and guiding her family from her sick chair better than many another mother in perfect health ; and I had also heard that their house was filled with treasures of art.

There is but one service in the church on Sundays, Dr. Hutton spending a portion of the afternoon in rest, and driving over to Torrence to hold a service at 4½ p. m. The Sundays seem such restful days to me here. At Burtonville there was one continual round of sermonizing—more than I, at least, could digest. Last Sunday, after our plain dinner, Henry and I sat on the lawn, in the shade of our beautiful locust trees, reading until about 4 o'clock, when Henry looked up and said : "Annie, I have a patient living half way to Torrence whom I ought to see to-night ; and I have just thought that we might go on to church, and stop on the way back for me to see my patient. There is no time to spare, though. Be sure to take a shawl with you, for part of the way is through a flat section of the country, which is very damp, even in the warmest nights. We reached the little church just in time. The congregation was small, mostly composed of factory hands.

I sat near an open window looking out over sloping green meadows, dotted here and there with those tall, graceful trees which, I think, are called weeping elms, and bordered at the farther side by thick, dark woods. A little stream, looking like a silver cord thrown carelessly down upon the grass, and the softened afternoon sunlight over all made a lovely, quiet Sunday picture. Dr. Hutton's remarks were few and simply worded, as fitted the capacities of his congregation ; but there was a force in them which indicated decided convictions, warmth of feeling, and a sense of the influence of his beautiful natural surroundings.

Henry said that there was no occasion for the practice of my pet theory at the house at which he had to stop ; so, fastening the horse near the mill stream which makes its way through this long, narrow valley, he left me in the carriage by myself. I spent the time in looking at the pretty views about me, and in thinking of the dear home friends at Burtonville, and of their probable whereabouts and occupations at that time.

Up to last Monday our life in our new home had been so pleasant that I had almost forgotten that I must not expect life to be always serene. That afternoon something occurred so very unpleasant and surprising that I was quite upset by it. But I will defer recording it until my next sitting at my journal, for Henry will soon be home, and I will not have my face clouded by thinking of anything so disagreeable as this.

Sorrow, and Its Dangers.

BY REV. HENRY WARD BEECHER.

SORROW is a condition of suffering in any of the emotions of the mind, in view of some event, past or future. It is the complement and counterpart of joy. Every faculty is calculated to produce pleasure, and, reversely, pain.

Sorrow acts in various ways; and in each way in various degrees, and according to the circumstances of each individual person. It has a two-fold effect. It may be beneficial or injurious. It is a glorious and a dangerous medicine. And yet, as all are likely, sooner or later, to come under the administration of this agent, it is of a great importance that we look somewhat narrowly into this matter, and understand our duties and dangers and privileges respecting it.

That sorrow is injurious which is in excess, and which is, on account of excess, unregulated, not being under the control of the reason. A mere wild, ungoverned, and ungovernable impulse of pain, directed to no good purpose whatsoever, submerging the mind, and smothering the mental powers, is always bad. There may be moments when sorrow is uncontrollable, and when one is relieved by giving way to it; there are bursts of sorrow which are but the experiences of the hour or the day; and it is better to let them spend themselves, and not narrowly mark their bounds and passages; but all sorrow, beyond the first relief of agonized feelings, should be held in check. It is wrong to be sorrowful too long. Because your trouble is real and well-nigh overpowering, it does not follow that you are under no obligations and duties. Sorrow is a school in which the school-master is very stern, and in which his rules are very strict and very rigid. It is often supposed that when persons are in great trouble, they are, as it were, released from the duty of self-control, and from their obligations; but at no time are persons under such obligations and such a duty of self-control as when they are under the sacred shadow of trouble.

There are those who think it is wrong to let their sorrows die out. If they find that their pain is becoming alleviated, they blow the embers again; they rake out the coals from the ashes that threaten to hide their sorrow, and they are almost alarmed at themselves when now and then some old joy breaks out. They

seem to feel that there is a sacred duty of sorrow, and that midnight ought to be their symbol and signal. They study sorrow. They bring back old experiences, and tempest their minds as much as they can. And continually they wear the badge of sorrow.

Now, life is too precious to be given up to one state of mind—especially one such as sorrow persevered in leads to. Sorrow, long continued, stupefies the mind, and takes from it discretion and sweetness of disposition.

Besides, such sorrow almost always runs to unhealth. It is not possible to have any faculty long under the influence of sorrow and not become morbid. It is dangerous for physical as well as moral reasons.

Let no one, then, have any romantic notion that sorrow has a right to all of life. No sorrow ever came upon the earth that has any such right. Sorrow has an errand; and its errand should be fulfilled; and then it should be cut short.

Many receive sorrow upon their pride; and they resent it. They compare their lot with that of others, not to find some reason of alleviation, but to find some reason for rebellion. I do not undertake to say that in the wreck which sometimes takes place in suffering and extreme sorrow, there may not be transient feelings of resentment and rebelliousness; but where under such circumstances sorrow comes to be settled, it is deadly.

Sorrow that is conquered by unworthy means must needs produce great demoralization; as when men, being overcome by some great sorrow, instead of turning it to a noble use by moral thoughts, instantly fly from all seriousness into worldly occupations. Work is good; and I do not think that any one ought to stop working on account of sorrow. Blessed are the poor; for when they have sorrow they must work for their raiment and shelter and daily bread. Greatly to be pitied are those whose sorrows come to them under circumstances in which they have no need of using their time. And I do not speak of flying to necessary duty as being wrong. But where men, outside of the industries which the ordinary necessities of life require, seek to run away from sorrow, and do not seek to gain a victory over it, they do wrong. By the stoicism of excessive

work they damage the contribution of their minds.

Seeking relief from sorrow, not in activity, but in frivolous pleasures, for the sake, as it is said, of *drowning* it, is also wrong. A mind may become so stained with surrounding objects that every single thing shall have hanging on it some remembrancer which aggravates one's sorrow; and it may be best, under such circumstances, that the person should be removed from home, taken out of somber associations, and induced to live where there is some saliency to life. Gayety is sometimes medicinal. But where one runs into giddiness, yea, into the frivolities of life, in order that he may not have the sufferings of sorrow, he turns that which ought to benefit him into mischief.

Still more dangerous is it where men seek relief from sorrow in dissipation. And yet worse is it where they seek exit from life by violent means.

All these are expedients for getting rid of sorrow which can not but hurt morals, and conscience, the father of morals.

Sorrows that are used for frivolous purposes must of necessity be very deteriorating to the mind. It does not seem as if real sorrow could be made exhibitory; but it is. There are those who really feel sorrow, but who can scarcely help, such is the vanity of their nature, using it for a purpose. They are afraid of being thought less sorrowful than they ought to be; and so they make up by putting on appearances. They are afraid of being regarded as not continuing their sorrow as long as they should; and so they extend its reign. Sorrow is dramatic under such circumstances. It has lost its truthfulness and its moral value, and has become merely a part of the drama of life. Such are not strong natures. Nevertheless, according to the measure of their strength, they are seriously injured by a sorrow that is treated in a manner so unworthy.

Sorrows often make men selfish and peevish. Great forbearance is to be felt toward those who are irritated by the attrition of a sorrow that must continue. Where it falls upon nerves rendered sensitive, partly, perhaps, by constitution, and still more by sickness and trouble, we should be very lenient in our judgment. A great deal of domestic peevishness is to be palliated, though not excused, by the fact that it is but a signal of suffering which nature holds out. Sorrow springing from disease, from incessant care, from over-mastering work, often gives rise to a peevishness which is of the hour, and which ought not to be set down weightily

against those who are the victims of it. But where, after such allowances have been made, sorrow tends to make a man more and more considerate of himself, and so more and more selfish, it has a deteriorating effect upon him. When sickness and bereavements and disappointments come and overturn the foundations on which we stand, and we are brought into jeopardy, we should be very watchful and careful lest we become hard, selfish, resentful, proud, rebellious.

On the other hand, there are beneficial results of sorrow such as, if they are realized in any considerable degree, should make a man thank God that he has been afflicted. Where, for instance, sorrow arouses latent strength and produces true manhood, it is a great blessing. Happy is he who uses his so as to make him better. Often sorrow is itself outgrown by the very growth which it inspires. Sometimes it develops in you things that you never could have come at independent of it. I have seen persons who seemed unfit to grapple with life taken hold of by sorrow, and inspired with a courage which prepared them to meet and bear themselves up manfully under all the exigencies of trouble to which they were liable. There have been many cases of men who, it would seem, if it had not been for sorrow, would never have been born into their better nature. And where sorrow melts or breaks down a crude and harsh nature, and softens, refines, enriches it, then it is accomplishing a most blessed work. Sorrow should be like loam, which, when the plow turns it, falls mellow from the share. Sorrows that are like clay, which when the plow turns it rolls over in lumps, and is more unmanageable after it is plowed than before, bring poor husbandry in the heart.

Dr. Spurzheim used to say that no person was fitted for domestic life who had not been educated by sorrow. Not that nobody should enter into that life who came with a smiling face unscarred with trouble; but that no person having come into that life could grow into the fullness thereof until he had been developed and disciplined in the school of suffering and sorrow.

There are many fruits which never turn sweet until the frost has lain upon them. There are many nuts that never fall from the bough of the tree of life till the frost has opened and ripened them. And there are many elements of life that never grow sweet and beautiful till sorrow touches them. Then they are like autumnal colors, and all men behold and admire

them. There is a sorrow that sweetens all acerbities, and corrects the naturalness of disposition. There is a sorrow that breaks down hard and reluctant natures. Many a man who would not yield to his fellow-men, at last yields to his own suffering and sorrow, and is all the better for it.

Sorrows are benefits to us where they lead us to broader resources of life. One of the mistakes that almost all men commit, is that of investing all their joys in one direction. It is wise for us to invest them in many directions, that we may never become bankrupt. When men invest their means, they scatter them in various directions, so that if bankruptcy should touch one sort of investment, others would be left. This is wise in money matters; and it is a great deal wiser in morals. When a man has all his means of enjoyment in one direction, if trouble comes, and his only resource is swept away, he is bankrupt indeed.

One man makes the whole engagement of his life to consist in business. He has no taste for any thing else. Reading does not please him; art does not; social comfort does not. He lives for enterprise. So long as he has health and strength to carry forward his business, he says: "I want no better life." And so long as his life is bright, and no clouds cross his sky, he may, perhaps, feel no need of any thing which he does not have. But by-and-by, when sickness and overwhelming sorrow come, and he is driven out of the refuge where he has felt secure, having made no other provision, and no new resource opening, as is usually the case late in life, he is ransacked and destroyed.

Another man makes his whole joy of life to consist in flattery and praise. He has no love of solitude. He has no communion with books; and of men, he has no communion only with those who are companions, or those who flatter and praise him. And when there comes, by any dispensation of God, a separation from these, his resources are all gone.

Another man lives wholly in his affections. So long as those whom he loves are left, he is happy; but when these are taken, life ceases to him.

Now the multiplied faculties with which we are endowed that have joy in them, are on purpose, it seems to me, to give us an intimation that we should not make our earthly enjoyments rest in any one thing. You need to have great resources of mind; and therefore you need to educate the understanding. You need, also great resources in the direction of imagination

and taste. You also need great resources in affection. And you need great resources in the direction of beneficence, and in the direction of activities in other ways. You need those various resources, so that when you are driven out of one you can take refuge in another.

Sorrows that leave the mind like a house that has been ransacked and stripped bare, are deadly indeed; but sorrows that say to a man: "It is not safe to trust any single line of experience or education for the resources of your life," are blessings for which we may well be thankful. Sooner or later troubles and disappointments will overtake you; and then where will your resources be? Are there resources that you can turn your mind to, in other directions than those which belong to this world? Blessed is the man whom no trouble can altogether destroy, but who, if he finds an enemy in his chamber, retreats to another, and bolts and bars the doors; and who, if he is driven out of that, finds another resource, and another, and rises higher and higher till he reaches the threshold of his Father's house, where no more sorrow nor crying can come for ever more.

We live too narrowly.

We live on too few alternatives.

We want broader resources.

Where sorrow more effectually introduces us into the knowledge of our own kind, it is a great blessing. There is nothing that makes a man take to his fellow-men, I think, as sorrow does. Men do not know much beyond their own sphere. I think they know very little of what is going on among the class that they do not belong to, though they know what happens in their little circle. It is the tendency of human nature to make a man separate himself from his fellows; but it is the tendency of true Christian growth to lead a man to recognize the bond of a common brotherhood. And toward this end some kinds of sorrow work wonderfully. This experience of sorrow—how it humanizes men!

A woman of great gifts and high culture, at about twenty-one years of age, was affianced to a man distinguished in literature and science, and she looked forward to a life of joy; but the ocean claimed him. The sorrow that fell upon her fell like multitudinous frosts in autumnal days; and no green and bright thing was left in all the field of her heart. With mighty strugglings through weeks and months she sought to stop her sorrow; and finally turned from it saying: "I will give my whole life hereafter to others, and let my own self go." She consecrated herself to the work of

educating, and is still earnestly, successfully, and bountifully spending herself in that work. And behold! her sorrows are all taken away and gone. She learned to give herself away to others; and when she found herself again, she was, as it were, regenerated.

Where sorrows disenchant life of its exaggerated satisfaction and goodness, without going to the other extreme, it is a great benefit. We are at first apt to think that life is better than it is, better than it wears, better adapted to give satisfaction than it proves to be; and when we discover our mistake we are apt to go to the other extreme, and find that life is all care and hardship. Blessed, therefore, is the sorrow that tempers our judgment.

Sorrows which make us feel that, good as the world is, it is not enough; that give as a sense that bright and sweet and desirable as life is, there is something brighter, sweeter, and more desirable, and that plant in our hearts the hope and expectation of a higher and better life—such sorrows are angelic. They prophesy to us, and fulfill their own prophecies. They do not lead us to deride the present, nor to refuse any wholesome bitterness, but they tell us of a rest hereafter.

I appeal, if not to your present or past experience, certainly to an experience that you will have. I do not say to the young: "Aot sorrowfully." I would not check the innocent hilarity and mirth of the present hour. I would not have any one feel that because sorrows are to come he is to act as though they had already come. If childhood rejoice, let it rejoice; only this: remember that days of darkness must come. And when they draw near, remember that sorrow has a meaning.

ONE MORE GLASS.—A short time since, at a Temperance meeting, before me sat a very respectable young working-man, with his wife by his side. They both seemed listening with much interest and emotion to the speakers. During the meeting some one left the platform and came up and spoke to him. I heard what was said.

"Heppell, I wish you would stand up and say a few words. If any one in the town knows the blessings of total abstinence, I am sure it is you."

The young man shook his head, and appeared to be saying "No" very often. But in the end he did stand up, and I think this was his speech:

"My friends, I never stood up to speak before, and I feel rather out of my place, but any thing I can say should help you, I ^{am} indeed, be very glad. I do not want to set myself up as a model for others, for I well remember those words: 'Let him that thinketh he standeth, take heed lest he fall.' What would warn my fellow-workmen against is, the habit of indulging in what they call just one glass. Ruin lies at the bottom of it. Some of you know me, but many do not, and I may just say that two years ago what I called just one glass was all but the ruin of me, body and soul. I went for this into a public house, and that glass sadly changed my home, nearly broke my wife's heart, lost me my character and my work, and sent me to prison. After that, when I should have known better, the delusion of toasting off one glass nearly overcame me. If it hadn't been for God's mercy just then, I might now have been far away beyond the seas or in a drunkard's grave. Working-men strike! and let it be not only against the drinking traffic generally, but against what is the ruin of thousands. I mean the delusion of just one glass. Giving up the drink has done more for me than merely making me respectable, it was the first step to my becoming a Christian. It led me to the house of God, where I learned to pray for a clean heart and a new life in every way. Take my advice and try it, all of you, and I can only hope it may do for you all what, through God's blessing, it has done for me.

"Once more let me warn old men and young, women and children too, of the danger of just one glass."—*B. W.*

THE PHILOSOPHY OF THE TEMPERANCE REFORM.—The philosophy of the Temperance Reform, so far as I have ever joined in it, is this: to emancipate society from this dire system of evil, the business of the country from this unfair competitor, and the politics of the nation from this evil and overshadowing influence. The great work which the Temperance men of this generation, and those who shall follow us when we have fallen asleep, is not to effect personal reformation only. That, as regards it, is incidental merely to the main work in hand. We seek rather to instruct ignorance, remove prejudice, quicken conscience, interpret economic law to the masses, and, by thus arming the moral sense of the nation against the traffic, eventually banish it from the land.—*W. H. Murray.*

Comparative Longevity of Man and the Lower Animals.

BY E. RAY LANKESTER, B. A., OXFORD.

I. INTRODUCTORY.

THE periodic phenomena observable in organisms have always a special interest for students of Nature on account of the extreme obscurity of their relations, as well as from the practical importance which they possess for mankind. There is probably but small room for doubt that ultimately the various recurring periods of death, of reproduction, of sleep, of hibernation, of gestation, of puberty, are all related to or derive their origin from those great astronomical cycles of change in the relative positions of sun, moon, and earth—which we know as year, month, and day. While in some of the periodic phenomena of organisms this relation is clear and direct, in others it is obscured by the introduction of most complex factors, which do not permit us to trace in the majority of organisms the operation of the astronomical cause. The duration of life* is vastly influenced by varying conditions in various organisms, but the prime factor in all cases is the influence of changing day and night, of alternate winter and summer, or wet and dry season.

Although it is vain (with present knowledge) to expect to gain a complete insight into those agreements between beings and their environment, of which the duration of life is one, yet certain facts and considerations have been pointed out which go far toward enabling us so to do. From the time of Aristotle onward, observers and philosophers have accumulated facts and multiplied speculation on the causes of longevity—the field is a well-trodden one, and for many years to come any increased knowledge of it must be looked for rather from the examination of long-acquired facts and their re-arrangement, than from new or unexpected observations by individual workers.

* The great importance which man attaches himself to long life, gives the inquiry into longevity in animals a greater importance than it deserves as a physiological or philosophical question. The varying intensity of life in different species, and the average mortality of a species, are more clearly influential quantities in nature than the possible length of life. Time does not appear in the organic world as an easily recognizable factor, for though in life, as in levers, what is lost in power is gained in time, it is difficult to distribute the amount of life of any given species rightly between intensity and length.

2. WRITERS ON LONGEVITY, AND GENERAL SOURCES OF INFORMATION.

In consequence of the general nature of the inquiry proposed in this essay, we have little in common with those who in former ages have enlarged upon the possible means of prolonging human life; nor are we concerned specially with those questions as to the possible and extreme periods of man's tenure of existence, which to-day occupy the attention of many literary men of an antiquarian or curious turn of mind. In the writings of these men we can not expect to find more than one limited class of facts bearing on comparative longevity; and in too many cases the facts so-called are not supported by scientific evidence. In a recent article in *The Quarterly Review*, and still more lately in *The Fortnightly Review*, admirable *résumés* are given of what is known and has been supposed with regard to this possibility of human life—a subject to which the term "longevity" has had its meaning narrowed, but one which will here be treated subordinatedly. It will be unnecessary, therefore, to refer further to authorities on this question, until their opinions are discussed. Naturalists and philosophers, including Aristotle, Bacon, and Haller, have incidentally given expression to opinion as to the causes of the varied tenure of life of organisms; but naturally the later writers have had a larger number of facts to deal with, and have been able to bring a sounder scientific knowledge to bear on the problem than those who preceded them. The treatise of Bacon, entitled "*Historia Vitæ et Mortis*," contains a most admirable inquiry into the causes of longevity. The question is attacked from every side, and the most ingenious hypotheses, with regard to animals and men, are suggested and discussed with that order and precision which belong to the great philosopher. At the same time it must be admitted that, in Bacon's time, strange traditions and superstitions held men's minds, and that he actually, who showed the means by which we have become free from such impediments, was to a considerable extent affected in this way. The account of the ages attained by various species of birds and animals, given by Bacon, is very extensive, and his remarks upon each case val-

uable. These are referred to hereafter; but his statements with regard to various cases of human longevity are less trustworthy, as well as his discussion of the value of inunction, of smelling fresh earth on waking, and other curious devices for prolonging life; little reliance, moreover, can be placed on the strange connections between longevity and personal qualities and characteristics, such as hairiness and temper, which Bacon enumerates. This treatise, however, is well worth the study of those interested in the subject, if only as a collection of strange fancies. Bacon's conclusions, set forth in the thirty-two canons at the close of his treatise, explain variations in longevity as due to variations in the density of the "vital spirits," and other causes affecting these spirits. The work of the Prussian physician, C. F. Hufeland, entitled "The Art of Prolonging the Life of Man," published in the beginning of this century, is to a great extent founded on Bacon's work, from whom most of his facts are derived. The advance in science during a century and a half, enabled him to treat the subject in a less metaphysical style than Bacon could; at the same time, his philosophy is one which has now in its turn become antiquated. Hufeland endeavors, by an examination of the various leases of life in the vegetable and animal world and their connected conditions, to discover what will favor and what will combat the prolongation of life in man; and the latter part of his work is a recommendation of temperance and regularity in the exercise of the various functions, such being the lesson derived from his general study. At the outset of his inquiry Hufeland observes: "Is it, then, impossible to penetrate the intimate nature of this sacred flame (life), and to learn to distinguish what will feed it from what will diminish it? I know how rash is the enterprise I have undertaken. I am about to approach a sanctuary from which so many presumptuous men have had to depart abashed and confused, and of which Haller himself, the favored confidant of Nature, has said that no mortal can penetrate therein." Hufeland had no cause to regret his enterprise, for though he did not accomplish his task, which indeed he could not hope to do, he has shown an excellent path, which it remains for others to improve and extend.

The general conclusions Hufeland arrived at are as follows. He says: "The duration of life depends then, in general, on the following circumstances—1. It depends on the quantity of vital force contained in the body. 2. Life consumes and destroys not only vital force, but

also the organs; the destruction of life ought then to occur later in a body endowed with vigorous organs than in one in which the organs are delicate. . . . Thus, a certain solidity of general organization and a suitable condition of the vital organs are the second condition on which length of life depends. 3. The consumption (of vital force and of organs) may be more or less rapid, consequently its duration, or, what amounts to the same thing, that of life, may be, other things being equal as regards forces and organs, shorter or longer, according as the act of destruction operates with more or less intensity. 4. Finally, since the reparation of losses is the principal means of counteracting consumption, a body which has the most perfect means of regeneration, both internal and external, will endure a longer time than one not provided with these means. In a word, the duration of life in a being depends on the sum of the vital forces which it possesses, on the greater or less consistence of its organs, on the rapidity or the slowness of its consumption, and on the perfection or imperfection of regeneration.*

The only criticisms on these views which it is at present useful to make, is that they involve certain ideas which have become modified with the advance of science, and hence require to be adapted to present knowledge. In the sequel it will be seen how far they differ or agree with modern conclusions.

A second work on Longevity, which treats of the general subject, and which, therefore, has an interest for the present inquiry, is that of the late P. Flourens, who was Perpetual Secretary to the Academy of Sciences of Paris, and Professor of Comparative Physiology at the Museum of Natural History. Flourens's work is devoted to human longevity in its first part, and in this connection he considers the longevity of other mammalia in order to answer this question: "Is there any sure characteristic in animals from which we may infer their length of life?" He gives the supposed age of several mammals, and the age at which the epiphyses of their bones are supposed to become united throughout the skeleton, and from this comparison he comes to the conclusion that in mammals and man the period of life is five times that of the period of growth—a very neat and valuable rule to aid us in examining the ques-

* Hufeland observes in one passage: "The more imperfect the organization the longer the life," after describing the prolongation of life in plants by pruning. His own facts are sufficient to refute this as a general law. The truth is the very opposite of this.

tion of the causes of longevity, where there is a real foundation for it in fact.* The data used by M. Flourens are, however, very few and of small credibility, while, such as they are, they do not bear out his law of an exact quintuple ratio. The suggestion of fixing by the junction of the osseous epiphyses the period of growth, is nevertheless one of great practical value.

In a work entitled, "Life—its Nature, Varieties, and Phenomena," Mr. Leo H. Grindon has discussed what he terms the various leases of life in plants and animals, using the data and inferences of Bacon, Hufeland, and Flourens, to a very large extent, but adding some which are of value. The relation of length of life to bulk, intensity, and fertility, which have been more or less clearly apparent to all who have thought on the matter from early times, are briefly set forth, and apparent exceptions to the laws enunciated are attributed to special design on the part of the Creator, to serve the special requirements of the exceptional organism, or of some other organism dependent on it.

Lastly, in regard to works, the volumes of Mr. Herbert Spencer must be mentioned. For whether we accept the new philosophy of Evolution, so marvelously born of Mr. Darwin's theory of the Origin of Species, or cling to an older belief, the fitness of things to their conditions, the correspondences of organisms to their environment, so ably set forth in Mr. Spencer's grand work, must enter into our theory of Nature. It may be a fair boast of the evolutionist that the founder of his philosophy has been led by the course of his speculations to trace a closer connection, a more complete adaptation of living things to their wants than the teleologist ever even hinted at, much as such a close connection would have added to the consistency of his theory of design. In his "Principles of Biology," Mr. Spencer, in the chapters on Genesis and on Multiplication, establishes certain laws of correspondence, which, together with the facts he so adequately cites, have the closest bearing on the antecedents of longevity. Nevertheless it is to be noted that the term "longevity" is not once used in these chapters, nor is the duration of individual life discussed directly at all. Did the nature of this essay permit, it would be perhaps the most satisfactory way of treating the question of longevity, to assume the contents of Mr. Spencer's volumes, and to write a last chapter on the Duration of

Individuals. This is not, however, the form which it is deemed right to adopt upon the present occasion, though frequent reference to and use of the views of this most eminent philosopher will be made.

Having dismissed the subject of books, let us consider for a moment the nature of the data which are available with regard to the duration of life. We shall find that the paucity and uncertainty of observations on this class of facts is something really extreme. Lord Bacon, in his "Historia Vitæ et Mortis," makes a remark which is true to this day: "*De diuturnitate, et brevitate vitæ in animalibus tenuis est informatio, quæ haberi potest; observatio negligens; traditio fabulosa; in cicurribus vitæ degener corrumpit; in aylestribus injuria calis intercipit.*" To begin with man himself, we have statistics, individual assertions, general impressions, experiment. It might be supposed that statistics would furnish very valuable evidence on this matter; but, in the first place, it is only within certain European areas and a part of America that statistics relating to age are prepared, and the qualifications to which these are subject, from the shifting of population, are of a very complex character; further, there is a remarkable personal equation in the observers, who are at the same time the subjects of the inquiry into age, which it seems almost impossible fairly to estimate. Men do not tell the truth as to their age, either from ignorance or from deceitfulness. The ill-educated and the aged are specially likely to make false statements from ignorance, while that "vanity which never grows old" affects equally the statements of old and young.

Individual assertions, taken alone and apart from the correction which the average of a vast number must insure, are, of course, still less to be depended upon, and for the same reasons. General impressions, such as are imparted to us by travelers, by poets, and even historians, are of very small value when they relate to the duration of life, where it is so easy to confuse wear and one of its factors age. Experiment of what will insure long duration of life in himself has been too rarely tried by man to make this class of evidence of any scientific value, while among animals man seems never to have selected or endeavored to produce longevity, probably because of its uselessness; had he done so, we might hope for some valuable facts from his experiments.

With regard to observations on the length of life of other animals, the certain knowledge is very small, only that tenure of life which is

*Buffon had previously supposed a ratio of 7 to 1 as that of the length of life to length of growth.

very brief being easily observed. The greatest uncertainty or even ignorance prevails as to the duration of life of even the commonest mammals, birds, and fishes; in most cases it seems only possible to say that it is not less than a certain period. This, of course, furnishes a limited means of comparison. A writer in the "English Cyclopædia" says: "Of the age to which the horse would naturally arrive, it is impossible to say anything satisfactory. Many have exceeded thirty, and some of them even forty, but from ill usage and over-exertion the majority come to their end before they have seen nine or ten years." M. Flourens gives exceedingly wide ranges for many mammals in his book above noted, while it is obvious, if we consider the position of many wild animals, such as the larger carnivora, most birds, reptiles, fishes, and aquatic animals, that any suppositions as to their duration of life can rest on but few facts. In reply to inquiries, Mr. Charles Darwin writes that he has no information with regard to the longevity of the nearest wild representatives of our domesticated animals, nor notes as to the longevity of our quadrupeds. Mr. Thomas Bell, the author of most valuable works on "British Quadrupeds," "British Reptiles," and "British Crustacea Podophthalmia," in reply to special inquiry, writes that the opportunities of observation are few, and the results necessarily uncertain as to length of life in Reptiles and Crustacea. Dr. Gunther, of the British Museum, a most able ichthyologist and naturalist, remarks, in a letter in reply to inquiries: "There is scarcely any thing positive known of the age and causes of death of various fishes." So, too, in Mr. Yarrell's works little is said of duration of life; while in Mr. Gwyn Jeffreys's admirable treatise on the British Mollusca a similar absence of knowledge with regard to those animals is admitted. The Insects form a remarkable exception, since in a great number of them the duration of life is well known.

Of still lower forms of life there is as little knowledge in most cases as in the higher forms. The Vegetable division of organisms among its higher and terrestrial members furnishes ample data; the ages of trees, shrubs, and such like forms appear to be well ascertained, but those whose condition and structure are diversified by aquatic habitat, leave us as much in ignorance as do similarly inaccessible animals.

Here, then, before entering on this inquiry, while but looking out on the road, we see how few are the guide-posts—how small the assurance

we can have of taking the right turn. When that immense engine of scientific observation, which is wielded by statisticians, has been fairly and fully applied to the human species, and to such of the many and varied forms of animal life as may be possible, not only as to determine length, but other quantitative phenomena of life also, then we may hope to see the problem, about to be discussed, definitely and clearly investigated by inductive method.

THE MORMONS, shrewd and far-seeing with respect to temporal advantages, yet profess to keep the rewards of the celestial Zions ever before them, as the chief motive of the actions and the goal of their desires. They present an extreme case of *other-worldiness*, satire, as it were, upon that spirit, which prevails too extensively among every people, leaning upon worn-out traditions rather than upon eternal principles, and of reaching forward to an unknown existence, to the neglect or misapprehension of the life which now confronts us, and in which our work manifestly lies.

The Mormon school system, too, is a poor substitute for the advantages of our common schools, to say nothing of those few great educational centers which are fast adding the results of old-world culture to new-world freedom from cumbersome traditions.

The Mormon law with respect to marital rights and duties is extremely strict, requiring far more self-denial on the part of the husband than is usually practiced by monogamists of the outside world, while the fulfillment of such laws is guaranteed through the piety of the citizens, and their firm belief that they are under the authority of a divine command.—*Mrs. Evans.*

WHAT IS DANGEROUS TO THE STATE.—Whatever tends to lower the tone of public morals, to debauch the mind, to corrupt the manners, to lessen the sum total of its industry is, to the full limit of expression, dangerous to the State. These causes, although slowly operating and often unnoticed, are none the less causes producing evil and evil only. The assertion that no representative government can long abide when the majority of the voting population are addicted to the vice of drunkenness, carries with its utterance the force of a demonstration. It produces a conviction on every candid mind, against the current of which no argument can stand.—*W. H. Murray.*

STUDIES IN HYGIENE.

A WORD ABOUT AIR.—The poet writes of "trifles light as air," but air itself is no trifle, that is quite certain. If you could but estimate the amount of mischief done by this ignorance of air, it would be so stupendous that it would astound you. Some persons have a notion that the only means of comfort is to shut up every hole in a room, and prevent the access of air. It is God Almighty's arrangement to give an unlimited quantity of pure air, and it seems to be man's arrangement to endeavor to limit that supply, and to deteriorate its purity in every way in his power. I have often mentioned the observation of an old clergyman, who used to complain greatly of his flock for shutting out the air. He said: "If I were to preach in a barrel, they would stop up the bung-hole." That is just what the majority of us do. I have been in houses—I have been in some to-day—where, for example, the top sash is nailed up—a suicidal act—doing such damage as one could scarcely tell of in the ten minutes that have been allotted to me. Now people will not drink dirty water—not willingly, though sometimes they are obliged to—but they have no objection whatever to take in dirty air. If they would but remember that from dirt comes death; if they would but realize the absurdity of the saying that "own dirt is no dirt;" if they would but see the absurdity, the dangerous absurdity of that saying, I am sure they would act very differently. From our own breath may come our own death. It has been shown pretty conclusively that about 700 cubic feet—say 10 feet by 10 feet, and 7 feet high, and we can all imagine a room of that sort—is about as small as a single individual should inhabit. I have been in houses where six people were sleeping in that same space; and, therefore, having 120 cubic feet, or something of that sort, each, instead of 700.—*Godwin.*

LOOK TO YOUR PUMPS AND WATER PIPES.

—Galvanized iron is supposed by many to be perfectly safe for use in pipes for conveying water, and it is often used in the endless-chain pump so common in some farming districts. Dr. Jackson, the Boston chemist, says, in regard to galvanized iron, that "it is protected by the more ready oxidation of the zinc, and the oxide of zinc is largely dissolved by water,

rendering it unwholesome. In several instances I have detected large proportions of oxide of zinc in water that has remained over night in galvanized iron pipes; and, in one instance, a gentleman who brought me such water said it produced in him much nausea. The water analyzed was found to be highly charged with oxide of zinc. It is well known that when zinc-covered roofs were first introduced in Boston, and rain-water from them was used for washing, that the washerwomen complained that the water made the skin of their hands crack, and the rain-water from zinc roofs was hard, and decomposed the soap. It is also known that the French Government has recently forbidden the use of galvanized iron water-tanks in their ships, on account of the injurious effects of the dissolved zinc on the health of the men." Our readers will do well to remember this, as unprincipled dealers will deny these statements in order to sell their wares. Galvanized iron is sold at a great profit.

CLEANSING BLANKETS.—It is quite as important to have the blankets on our beds clean as to have the sheets pure and white. The foul emanations which they absorb in time makes the bed any thing but sweet. The Boston Journal of Chemistry gives the following method of cleansing blankets:

"Put two large tablespoonfuls of borax and a pint bowl of soft soap into a tub of cold water. When dissolved, put in a pair of blankets, and let them remain over night. Next day rub and drain them out, and rinse thoroughly in two waters, and hang them to dry. Do not wring them."

But this is not the only domestic use to which borax may be put. Says the same journal:

"Borax is the best cockroach exterminator yet discovered. This troublesome insect has a peculiar aversion to it, and will never return where it has once been scattered. As the salt is perfectly harmless to human beings, it is much to be preferred for this purpose to the poisonous substances commonly used.

"Borax is also valuable for laundry use, instead of soda. Add a handful of it, powdered, to about ten gallons of boiling water, and you need use only half the ordinary allowance of

soap. For laces, cambrics, etc., use an extra quantity of the powder. It will not injure the texture of the cloth in the least.

For cleansing the hair, nothing is better than a solution of borax water. Wash afterward with pure water, if it leaves the hair too stiff. Borax dissolved in water is also an excellent dentrifice, or tooth-wash.

PERSPIRATION.—The amount of liquid matter which passes through the microscopical tubes of the skin in twenty-four hours, in an adult person of sound health, is about sixteen fluid ounces, or one pint. One ounce of the sixteen is solid matter, made up of organic and inorganic substances, which, if allowed to remain in the system for a brief space of time, would cause death. The rest is water. Beside the water and solid matter, a large amount of carbonic acid, a gaseous body, passes through the tubes; so we can not fail to understand that they are active workers, and also we can not fail to see the importance of keeping them in perfect working order, removing obstructions by frequent application of water, or by some other means. Suppose we obstruct the functions of the skin perfectly, by varnishing a person completely with a compound impervious to moisture. How long will he live? Not over six hours. The experiment was once tried on a child at Florence. Pope Leo the Tenth, on the occasion of his accession to the papal chair, wished to have a living figure to represent the Golden Age, and so he gilded a poor child all over with varnish and gold leaf. The child died in a few hours. If the fur of a rabbit or the skin of a pig be covered with a solution of india-rubber in naphtha, the animal ceases to breathe in a couple of hours.—*Journal of Chemistry.*

Where the person is confined in-doors the perspiration adheres to the skin, hence the necessity of bathing. A good bath also brings the blood to the surface, and makes the skin vigorous and healthy, as well as clean. Those who imagine a bath is only valuable as a means of cleanliness are mistaken. It is quite as useful in promoting surface circulation.

WHERE DO YOU LIVE?—It makes some difference where we live after all, as well as how we live. If you happen to live in Fifth Avenue, for instance, you have a fourth chance more of life than you have if you live at Five Points—that is to say, for every twenty-nine persons who die at Five Points, there are only about twenty-four persons who die in

Fifth Avenue. Now say that five persons additional in a thousand die because of bad arrangements—and we should say that a great many were dying even in Fifth Avenue from bad arrangements; but take the worst as compared with the best, and what does the death of five persons in one thousand, in a great city of nearly a million of inhabitants tend to imply? It means the unnecessary death within the year of nearly five thousand persons! Points of this sort, if got into the mind, will show the necessity and value of sanitary movements and improvements, the provision of fresh air, good water, and pure food.

A BAD BED.—Mr. Godwin, an able lecturer on sanitary science, in a recent address in Newcastle, England, says:

"I knew a bed in a hospital where every patient died who was put into it; I knew a stable in which no horse would live beyond a certain number of months; I know houses where successive families are stricken down by fever as they go in, all of which might be prevented by a little knowledge."

Mr. Godwin does not tell us what that little knowledge is to which he refers, but it is not hard to guess. Cleanliness and disinfection, sunlight and fresh air, would prevent any such results as Mr. G. speaks of.

SERVANT GIRLS' KNEES.—Mr. Richard Tavy, in a communication to *The Medical Journal*, in reference to "Housemaids' Knees," remarks that during the past year twenty-one cases of this affection have been registered as in-patients at the Westminster Hospital (one man and twenty girls), demonstrating that some mechanical improvements are needed in the common scrubber's necessities. He maintains that it is an unnecessary and quite a cruel custom that servants should subject their knees to the cold pavement or damp floor, and to continued pressure, to insure a clean doorstep, a bright hearth, or a polished floor. Flunkies, who, of course, have too much self-pride to knuckle down and clean their halls, use the American squeegg-brush, or a long-handled mop; the women in Holland clean their steps with an appliance combining the brush and wiper; the Parisian garçon waxes his floor with a footbrush, and so on. Let, therefore, our poor English girls be supplied with brushes and wipers, that can be used in the erect posture. Then our housemaids will be eased of a frequent and painful, if not a dangerous affection; our hospitals will be provided with more

empty beds; and employers will be spared the inconvenience of sending their broken-kneed drudges into the wards of the nearest charitable institution."

Perhaps some American servant girls may be in need of this knowledge. It is not at all uncommon in New York to see them on their knees with the scrubbing-brush cleaning floors and stairways. The work can mostly be done by a long-handled brush or mop quite as well, we think.

MISTAKES OF AMERICANS WHO LIVE IN CITIES.—In the cities of America the worst sanitary defects of the worst cities of Europe are being repeated. The sanitary engineer of the future will know nothing of "refuse matter" other than as a useful product, which, properly applied to the soil, will add to the wealth of the community. The aim and end of statesmanship ought to be to insure to every individual born in the State means of health and of morality. Each man's home should not only be his castle, but his hospital. Charity will not then degrade, but will elevate; and that alone will be true charity which assists the poor to assist themselves, and so to live independent of all alms-begging and alms-giving.

It is often said that the charitable institutions of New York are the pride and glory of the city. In one sense this is true, but it occurs to us that it would be better if we did not need quite so much of this sort of glory. Passing along Baxter Street recently we noticed tumble-down rookeries enough to disgrace any city, and yet these holes swarm with inhabitants. Why do they live so degraded. The only answer is, the people spend most of their wages in drink, consequently their homes must be degraded. Two-thirds of the working people of New York drink and smoke up all their surplus savings, and as long as this is so sanitary regulations must be very imperfect, and the necessity for charitable institutions far beyond what it ought to be.

EFFECT OF TREES UPON CLIMATE.—Of the effects produced upon climate by the denudation of the soil there is no room for doubt. To a certain extent the influence of human labor in the thinning of forests is beneficial. But the limits between culture and destruction are rarely maintained. In the year 1816 the forest came up close to the city of Philadelphia. The Delaware, a mile wide, was then often frozen in a single night. The edge of the for-

est has receded to a distance of more than thirty miles. The thermometer is now rarely down to zero; the river is hardly ever frozen; nor does snow lie long on the ground. In the forest it lies very long. The increased aridity of Palestine, of Spain, and of the south of France, is well known. In the former case it has been partly caused by the cutting down of the olive, a barbarous incident of warfare, merely forbidden by ancient law. In the last-named country it has been the need of fuel that has led to the denudation of so many districts, and the double evil has ensued—first, that the humidity of the climate has been reduced to a formidable extent; and, secondly, that when rain does fall, in any unusual proportions, the absence of the great natural absorbing power of forest districts allows the entire product of the rainfall to be discharged at once by the natural drainage, thus causing those floods which have proved so formidable in their ravages within the last few years.

Trees have a wonderful effect in purifying the air and supplying it with oxygen. A large tree takes in daily more carbonic acid, and gives out more oxygen, than several men can consume.

PERISHING FOR LACK OF KNOWLEDGE.—In Great Britain alone more than one hundred thousand people perish annually, and at least five times as many sicken grievously, out of pure ignorance of the laws of health, which are never imparted to them at school. They have no chance of learning them afterward, as they possess no secondary schools. The mere tools of education are put into the hands of children during their school time, without any effort being made to teach them how to use the tools for any profitable purpose whatever.

In Great Britain statistics are more carefully taken regarding these subjects than in America, but it is probable that here there is quite as much loss of life and time, from ignorance of the laws of health, as there. If we are to judge of the general diffusion of sanitary knowledge in England by the sale of books on health, they certainly read more on the subject than we do.

HIGH AIMS.—Those who aim at high intellectual achievements may be assured that no part of their time will be less wasted than that which they employ in becoming familiar with the methods and with the main conceptions of the science of organization and life.—*John Stuart Mill.*

RECIPES FOR COOKING.

PORRIDGES.

No. 1. WHEAT-MEAL PORRIDGE.—Having boiled one quart of soft water, and mixed half a pound of meal in a little cold water, mix them together, and boil for fifteen minutes, stirring it occasionally. Pour it into basins, and let it stand for ten minutes. To be eaten with fruit, sugar or molasses, and bread.

No. 2. OAT-MEAL PORRIDGE.—People generally err in cooking this article, and hence they seldom succeed in making it palatable. There are two kinds of oat-meal—the Fine and the Round. We recommend the latter. It should be fresh. Having dissolved a little salt in a quart of soft water *boiling* in a saucepan, sprinkle with the left hand, while stirring with a wooden spoon with the right hand, half a pound of meal; let it boil *all over the surface* for twenty minutes, stirring it nearly the whole time. Turn it out into basins or soup-plates, and let it stand for five minutes before eaten. It should be served as Wheat-meal Porridge.

No. 3. INDIAN-MEAL PORRIDGE.—Make same as the Wheat-meal Porridge.

No. 4. INDIAN FARINA PORRIDGE.—To one pint of boiling water add four table-spoonfuls of farina; mix and serve the same as the Wheat-meal Porridge.

No. 5. ARROWROOT PORRIDGE.—Mix one ounce of prepared arrowroot with a table-spoonful of cold water, then pour *boiling* water on it to make it the required thickness, stirring it well at the same time. A slice or two of lemon, with a little sugar will be found an improvement. To be eaten with crackers or bread.

No. 6. BOILED WHEAT PORRIDGE.—Having soaked over night one pound of good wheat in pure soft water, strain the water off and add a quart of fresh; stew it gently till quite soft. It may be eaten as Wheat-meal Porridge.

No. 7. A GOOD BREAKFAST for eight persons for about a dime. Put half a pound of rice and half a pound of Scotch barley into one gallon of soft water; stew them gently for four hours. Then add four ounces of molasses and a little cinnamon; boil another half hour. This will produce eight pounds of good food.

No. 8. LENTIL PORRIDGE.—Three table-spoonfuls of lentil-flour; one salt-spoonful of salt, and one pint of water. Mix the flour with the water and salt, and boil ten minutes, stirring it all the time while boiling.

No. 9. SAGO PORRIDGE.—Four table-spoonfuls of sago, one salt-spoonful of salt, and one quart of water. Soak the sago in cold water for a few minutes, and boil it gently about an hour, adding the salt; pour it into soup-plates, and serve with molasses or sugar.

No. 10. SAGO AND RICE PORRIDGE.—Equal quantities of sago and ground rice. Proceed as with Sago Porridge.

No. 11. MILK PORRIDGE.—Take of new milk a pint and a half, and half a pint of water; place it over the fire. When just ready to boil, stir in a table-spoonful of flour, wheat-meal, oat-meal, or Indian corn-meal, previously mixed with a little water; after boiling a minute, pour it on bread cut into small pieces.

GRUELS.

No. 12. ARROWROOT GRUEL.—Pour a pint of boiling water on three-fourths of an ounce of arrowroot, previously mixed till smooth with a little cold water, stirring it constantly; return it into the pan, and let it boil a few minutes, adding sugar and lemon-juice, or raspberry vinegar.

No. 13. ARROWROOT GRUEL.—Take one ounce of arrowroot, and two large table-spoonfuls of preserved black currants. Put the currants into a pan with a quart of water; cover the pan, and let them stew gently about half an hour; then strain the liquid, and set it on the fire; when boiling, pour it gradually upon the arrowroot, previously mixed with a little cold water, stirring it well; return it into the pan, and let it boil for a few minutes gently, adding sugar if required.

No. 14. OAT-MEAL GRUEL.—Set a quart of water on the fire, and when quite hot, but not boiling, pour it on a table-spoonful of oat-meal, previously mixed with cold water, stirring it well; take out the spoon, and leave it to settle for about two minutes; then pour it carefully into the pan, leaving the coarse part of the meal at the bottom of the basin; set it on the fire, stirring it till it boils; when boiled for five or six minutes, skim it, and add either salt, pepper, and butter, or sugar and nutmeg.

No. 15. CURRANT GRUEL.—To a quart of oat-meal gruel, strained, add two table-spoonfuls of currants, and after boiling a few minutes, add sugar and nutmeg.

No. 16. GROAT GRUEL.—Pick the groats very clean, and steep them in water for several hours; then boil them in spring water till quite tender and thick, and add boiling water sufficient to reduce the whole to the consistency of gruel, also currants, sugar and grated nutmeg.

No. 17. SAGO GRUEL.—Take two table-spoonfuls of sago, and one quart of water. Wash and soak the sago a few minutes in cold water; stir it into the rest of the water when boiling; boil slowly till the sago is well done, and add sugar and nutmeg as required.

No. 18. TAPIOCA GRUEL.—Wash a table-spoonful of tapioca, and soak it in a pint and a half of water twenty minutes; then boil gently, stirring frequently, till it is sufficiently cooked, and sweeten.

EDITORIAL DEPARTMENT.

HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE.

Devoted to the Improvement of the
Body and Mind.

NEW YORK, JANUARY, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as indebted for every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.

Exchanges are at liberty to copy from this magazine by giving due credit to THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

A NEW YEAR'S TALK—HYGIENE.—Hygiene is an art which has for its object the promotion of the health of body and mind, and the lengthening of life for as many years as the laws of our being will allow. It teaches those conditions by which perfect growth is secured. It shows how bodily decay may be made less rapid, and it tells how life may be made more vigorous and death more remote. In its largest sense Hygiene relates to and includes rules for the best culture of both body and mind. A perfect system of hygienic knowledge would take in all that is known by the physician so far as it relates to preserving health of body, all the knowledge of the teacher pertaining to the care and education of the

mind, and all the wisdom of the minister bearing on moral and religious life. Without a knowledge of Hygiene, perfect men, women, and children will never grace our earth. It is the blind hope of thousands, it is the longing of multitudes of earnest souls, that at some future day the world will be filled with perfect people, who can live together in peace and happiness. It is the belief of very many that some time in the future history of our globe the enormous waste of life which now goes on by war, and pestilence, and disease, will be stayed, and the terrible sufferings which fill the world with wailing will not exist. But this day can never come until a perfect application of hygienic knowledge is made. Look at the world as it stands to-day. What awful perversions and alienations—what terrible sufferings and abasements! The capacity for happiness is great—the enjoyment of it comparatively little. Would such a state of things exist if a knowledge of the laws of life was well understood and put in practice? Certainly not. If hygienic knowledge were sufficiently exact, and could always be applied, we might hope to see the dreams of prophets and reformers realized. This may never be; but we may hope in some degree to approach a time when human health and strength shall be more nearly universal, human suffering rare, human happiness more abundant, and the terrible waste of life that now disgraces our civilization stayed. We consider it the duty of every human being to not only acquire such knowledge as shall enable him to live long and well, but to help to spread it among others. Most of us live too much to ourselves. What work can we engage in that will help on the good time coming so much as to extend a knowledge of the laws of life among all people as we have opportunity! On this beautiful New Year's morning let us, one and all, give some attention to this subject.

It is the usual custom, on each recurring New Year's Day, to salute our friends with a wish for a Happy New Year. We do this with a hearty good-will, and we mean during the next twelve months to make our wish good, by spreading before our friends such a feast of good things as shall contribute to their real happiness. New Year's Day should not be a day devoted to reckless dissipation, to drinking, and frivolous pleasures, but to plans for a new life. Our hearts are sickened by the methods which people have of turning the first day of the year into a day of evil instead of good. It should be exactly the reverse.

Oh beautiful New Year's morning,
We rise at thy glorious dawning;
We bless the Father for duties done,
For battles fought, and victories won.

The old, old year reviewing,
We are glad for past well-doing—
We are glad for the moments nobly spent,
And glad for mercies kindly sent.

We are glad for our life-blood flowing,
For the health sweet joy bestowing;
For this world's goods a fair increase,
And glad for our homes of love and peace.

The old, old year reviewing,
We are sorry for all ill-doing—
We are sorry for treading forbidden ways,
And sorry for idle hours and days.

We are sorry for harsh words spoken,
For promises given and broken—
For gains ill-gotten and squandered wealth,
And sorry for wasted strength and health.

Oh beautiful New Year's morning,
May we all by the past take warning,
And garner our time, and sow good seed
That may yield us a golden crop in need.

THE FIRST OF JANUARY—WINE.—Last year we entered our protest against the custom of treating friends with wine on New Year's Day. It is bad enough to become gluttons on holidays, and stuff the stomach to excess with unwholesome food: but when wine is added the

case is a hundred times worse. No matter what excuse is offered for using wine, do not do it! These bodies of ours are too sacred to be made the receptacle of a drink that takes away all grace of motion, all power of upright manly carriage; these brains too valuable to be muddled so as to talk only gibberish. This is woman's field of reform. She ought to make drinking so disgraceful that a young man with an ounce of wine in his circulation would hide himself from sight until it is out. **THE HERALD OF HEALTH** has been first and foremost against this fatal practice of beginning the year by being, even for the time, a wine-bibber. We have reason to believe the work it has done in this direction has been useful; indeed we know that most of our readers think as we do on this subject. But there are thousands who do not think as we do, and to such we give this warning voice: **DO NOT OFFER WINE TO YOUR FRIENDS ON NEW YEAR'S DAY!**

LITERARY VALUE OF GOOD HEALTH.—

We trust that many of our readers have already made the acquaintance of Col. Higginson's last book. We refer to "Malbone—An Oldport Romance," a work full of poetry, of subtle and eloquent thought, and practical wisdom. In the course of the story the principal character, Philip Malbone, says to his friend Harry:

"Who cares for literature in America, after a man rises three inches above the newspaper level? Nobody reads Thoreau; only an insignificant fraction read Emerson, or even Hawthorne. The majority of the people have hard even heard their names. What inducement has a writer? Nobody has any weight in America who is not in Congress, and nobody gets into Congress without the necessity of bribing or button-holing men whom he despises."

"But you do not care for public life," said Harry.

"No," said Malbone; "therefore this does not trouble me, but it troubles you. *My diet is good. I can always amuse myself.*"

Perhaps some readers will not instantly recognise the logical connection between the short sentence above which we have italicised and the one which precedes it. The man seems that he is content; and the reason he gives for being in that enviable frame is—not that the world wags to suit him, not that he has found a great mission, not that he is making money, friends, or fame—but simply that his *digestion is good.* In our opinion that explanation is the best that could be given, because it is the most scientific. The world is full of misanthropes and grumblers. To them every thing seems askew and upside down. Their lives are passed in doleful complaints or in growling. Their faces tell the whole story of their discontent, and the tones of their voices echo the miserable eloquence of their faces. It is of no use to preach to these people the religious duty of a contented spirit. The difficulty with them is not moral, but physiological. Their case is not one of impiety, but of indigestion. They have a vivid sense of the truth of a recent epigram: "Hell is full of dyspeptics, and dyspeptics are full of hell!"

But, when we commenced this article, we were thinking of the few very great writers whom America has produced, and of the long years of neglect which they had to endure before their souls were gratified by general recognition. What enabled them to bear cheerfully this period of obscurity? What kept them from lowering the standard of their thought and style in order to catch instantaneous notice? We have no doubt that the answer is found in Malbone's sentence: their digestion was good—they were healthy men, and were able to find a lofty joy in their intellectual labors, even though slighted by the world.

Thoreau was one of the rare and true geniuses of the world, and what he wrote was filled with the divine breath of inspiration. Yet his first book sold so slowly that for very shame he carried home from the publishers the entire edition and stowed it away in the garret. But Thoreau held daily communion with Nature—he was as natural and as healthy as the

birds and the fishes with which he associated, and he could pursue his career of literary activity without fretfulness, without letting down his standard, and without despair.

The example of Nathaniel Hawthorne is even more pertinent. By the unanimous suffrage of the best judges he is now recognized as the most perfect prose writer yet produced in America; but how many long years did he toil, and how many exquisite volumes did he print and leave to their repose on the booksellers' shelves, before the public found out his worth? Was he sorrowed by this injustice? Not in the least. He was endowed with a fine and happy physical organization; his health was good, and he was able to make his very obscurity material for pleasant jokes, and to say merrily of his one appreciative reader: "I had always a sturdy faith in his actual existence, and wrote for him year after year, during which the great eye of the Public (as well it might) overlooked my small productions."

Unless we are greatly mistaken, Col. Higginson has himself had experience of the truth which he has put into the mouth of Philip Malbone, and could testify to the fine connection between a contented spirit and a sound physical condition.

The literary value of good health is seen likewise among famous men who toil with brain and pen, though on a lower plane of literary art than those whom we have just mentioned. Consider such men as Horace Greeley, Henry Ward Beecher, Garrison, James Gordon Bennett, Theodore Tilton. What workers they are! What worders they accomplish! What splendid health they have, and how they try to keep it!

There are those who appear to think that health is indispensable to those who toil with their bodies, but not absolutely so for those whose labor is mental. No mistake could be greater. Says Wason: "Intellect in a weak body is like gold in a spent swimmer's pocket—the richer he would be under other circumstances, by so much the greater his danger now."

WESTON, THE WALKER.—Weston, the far-famed walker, recently made an unsuccessful attempt to walk four hundred miles in five days in this city. Mr. Weston is a small but tough man, weighing, probably, one hundred and twenty-five pounds. His limbs are small; the girth about his waist can not be much, if any, over thirty inches, showing too little digestive power for long-continued exertion. He is very straight, and in walking carries himself remarkably erect. His gait is like that of a man of energy, but not of great power. On the second day he undertook to walk one hundred and twelve miles in twenty-four hours, but succeeded in walking only one hundred miles, and we think this feat quite enough for him. Mr. Weston, we judge, is a trifle nervous—indeed, his temperament indicates this. The first night after he commenced this feat he was restless and only slept one hour. We are not confident but this condition was caused by the amount of tea the papers reported he drank. The medical gentlemen who had Mr. Weston in charge promise to publish a report in due time which shall have valuable scientific bearings on physical questions. If any thing useful is brought out we shall let our readers have the benefit of it. In a moral point of view, we do not consider such exhibitions as useful, but the reverse, and we hope that Mr. Weston will not repeat his last experiment. The talent he exhibits in his attempts to walk long distances, if turned to other channels, would produce better results. If he chooses to sacrifice himself to science, let him do it in a less public manner.

INSANITY IN PARIS.—The Times says that "it is not strange to hear that a terrible number of cases of insanity have declared themselves in Paris, and that they are chiefly due to drink. From the first, the quantity of wine and spirits in the besieged city, as is well known, has been relatively greater than the amount of food. There has been no need, except for the sake of preserving order, for limiting the wine rations at all. It is easy to understand how grief over the loss of friends, and

the woful state, of the country, unwonted excitement and barrack life, should have combined with bad food to produce this sad result. Of seven hundred cases of insanity in the National Guard alone, we are told that six hundred have been brought about by spirituous liquors. Several instances have occurred of men falling off the ramparts into the ditch and being killed—the fatality being ascribed to excess at the canteen. Respectable citizens, who have never before been known to drink hard now, it is reported, remain in a constant state of intoxication, and the same is said of women.

THE THRALDOM OF FASHION.—A society of ladies is being formed in Lafayette, Indiana, "the general objects of which are to free the members from the thralldom of fashion, and leave more time for pure, healthy pleasures, intellectual improvement, and ennobling pursuits, such as every true woman's heart craves."

If the women of a hundred other cities would do the same it would be well. Fashion has its uses, but when it interferes with true development, when it consumes time that ought to be devoted to high attainments, then it is time to put it under our feet.

STAMPING OUT SCARLET FEVER.—The patient should be placed in a separate room and no persons allowed to enter the sick room except the nurse and the physician in attendance, or to touch the clothing or bedding used in the sick room until it has been thoroughly disinfected.

All clothing, bedding, and other articles not absolutely necessary for the use of the patient should be removed from the sick room. Articles used about the patient, such as sheets, pillow-cases, or clothes, must not be removed from the sick room until they have been disinfected by placing them in a tub with the following disinfecting solution: Eight ounces sulphate of zinc, one ounce carbolic acid, three gallons water. They should be soaked in this fluid for one hour, and then be thrown into boiling water and thoroughly washed. Feather and

hair pillows and mattresses require fumigation.

All vessels used to receive the discharges of patients should have some of the above solution kept constantly in them, and immediately after their use be removed from the sick room and emptied. Water closets and privies must also be disinfected daily with some of the same solution. A piece of muslin, one foot square, should be dipped in this solution and suspended in some part of the room constantly, and the same be kept in the hallways adjacent to the sick room. All straw beds should be burned after use, but not removed from the room.

It is advised not to use handkerchiefs about the patient, but rather old, soft rags, which should be immediately burned after use.

The ceilings and side walls of the sick room should be thoroughly cleansed and lime-washed whenever the patient has been removed therefrom.—*Morreau Morris, M. D.*

COMPENSATION.—Compensation, in the workings of organic law as to the human body, is strikingly illustrated by George Combe, in the eighth chapter of his admirable book on "The Constitution of Man." He shows that the penalties for violated law often most clearly exhibit the benevolent designs of the law itself. The organic law of *Vital Sensation* is under consideration. We give the general thought and not the language: In the long time ago, when Jupiter, *pater*, ruled the world, and fables were facts, a poor plowman lay on his couch racked with pain and burning with fever. He cried out in his anguish: "O Jupiter, O Jupiter!" The god came at his cry. "What wouldst thou, my child?" was the kind inquiry. "Thou art unreasonable and cruel in thy laws, O Jupiter. I was plowing in my field, which thy laws make needful, in order to support myself and my family; and, while thus employed, a storm of thy rain drenched me and a cold blast of thy wind chilled me, and now I lie agonized with excruciating pain. Compassionately Jupiter replied: "I see, my poor child; thou dost complain of my law of

sensation, common to thee and all my sentient creatures. Shall I release thee from the operations of this law, so far as thyself art concerned, both as to its penalties and its rewards as well? At thy wish, and on these conditions, shalt thou be quite relieved from pain." "Most kind and mighty Jupiter," earnestly exclaimed the sufferer; "for such a boon thou wilt have my highest and most lasting gratitude!" "Be it so," replied the god. The plowman was at once restored to perfect health, and again follows his team a-field. How great must now be his happiness! The law of sensation is no longer applicable to him. Fever will no more burn up his blood; pain in none of its sharp agonies will ever again course through any part of his body. How little did he understand that in thus curing pain he also made all pleasure impossible. As before, the blood poured its vital currents through his veins, the air came to his lungs, light to his eyes, sounds to his ears, but he heeded them not. The law of sensation was suspended as to him. He went to his home; no sweet voice of wife or child greeted his coming. The loving kiss and fond embrace gave back no emotion. Tenderness and affection no more swelled his bosom. What consternation and distress unutterable now fills his soul. "O Jupiter, O Jupiter!" was again the intensified outburst of his wretched heart. Again the god listened to his call. "What now, my miserable child? Art thou still not content, since at thy wish I even set aside my law of sensation so far as applied to thee? What wouldst thou now?" The poor man recited his sad experience, while exempt from the law of sensation, and cried out: "Any thing rather than this." "Wouldst thou then be returned to thy couch of pain, to accept and bear patiently the penalty of my violated law? Wilt thou also more wisely and carefully seek to obey all my laws?" "Most gratefully, O Jupiter, do I accept thy clemency and promise obedience."

The same principle of compensation is equally true of every organic law not only, but all laws of the blessed and infinite Law-maker.

A PLEA AGAINST WHISKERS BY AN OLD MAN.—Much has been said and written about the disgusting practices of chewing and smoking tobacco. There is another practice or habit very prevalent, which, I think, is much more disgusting, pernicious, and prejudicial to health than the use of tobacco, which ought not only to be disapproved of, but condemned, by every person who has any regard for self-respect and the comfort of others. It is only about fifty years since the practice of wearing whiskers, and only about half that time since that of wearing mustaches, was first practiced by the people of our Eastern and Northern States. The practice was aped from foreigners. Webster says (see the word "Ape"): "Weak persons are always prone to ape foreigners." I would not say that all persons who wear whiskers and mustaches are weak-minded, but I am very sure the practice is not evidence of strength of mind. Physiologists tell us that the blood is highly charged with carbonic gas, a deadly poison, and which, if retained in the lungs, will produce speedy death. The blood, in circulating through the system, passes through the lungs, where the carbonic acid is thrown off in the form of gas, after which the blood again passes through the system, again imbibing carbonic acid, which is thrown off again, as before, through the nose and mouth, but almost wholly through the nose in persons in good health. The mustache, being a thick tuft of hair, receives the full charge of this poisonous gas at each expiration of the breath, and at each inhalation of the pure air it has to pass over and through the mustache so poisoned into the lungs. Many persons who wear whiskers and mustaches chew or smoke tobacco, the poisonous effluvia of which is thrown into the mustache, to be carried into the lungs at each inhalation. A knowledge of these facts ought to be sufficient to induce every person of common sense and reflection to abstain from a practice so prejudicial to health.

There is another reason why the practice should be repudiated—it changes the tone of the voice and makes it more indistinct, and should

never be tolerated in public speakers, and particularly in clergymen, who ought to set better examples. The practice also makes the human face look more like that of an ape or monkey than of a man of intelligence. Perhaps it will be said that a protest in this matter will have no more effect than has been produced on those who use tobacco, or that of the Pope's bull against the comet.

However it may be as respects the efforts of men, there is a power which has as yet been kept in reserve, which, if brought into action, will, I believe, be effectual.

Women have rights which men are bound to and will respect in this matter. It must be extremely disgusting and offensive to every lady of any sense of delicacy to have a mustache saturated with the poisonous effluvia of carbonic acid and tobacco-smoke thrust under her nose and mouth.

If every wife and maiden will resolve, and strictly adhere to the resolution, that they will neither receive from, nor give to, a husband, lover, or beau, the salutation of a *kiss*, who has not a smooth and clean face, this very disgusting practice will soon be abolished.—D. J.

[EDITORIAL NOTE.—We fear it is too late in the day to protest against whiskers. The fact that they grow and can not be extirpated is an indication to our mind that Nature intended them to be worn. Like the nails and hair they should be well cared for, and there is no more sense in shaving them off than there is in shaving the hair off the head, or cutting the finger-nails down to the quick.]

INSANITY AND POOR DIET.—In England and Wales, out of 64,713 persons of unsound mind, 43,325 were of the pauper class, and the Lunacy Commissioners report that in a great majority of cases impaired nutrition was the cause of malady. Upon bodies and minds thus reduced, griefs and perplexities act with most damaging influence. Wholesome food, and a good stomach to elaborate it, would keep a majority of the race sane in mind and body.

How to Treat the Sick.

HAS SCARLET FEVER ANY RIGHT TO SO MANY VICTIMS?—Scarlet fever seems to enjoy that immunity which is accorded to what are called "necessary evils;" but when we come to inquire what right this disease has to carry off ten or twelve thousand persons annually, we find that it ought no more to exist among us than small-pox or cholera.

Scarlet fever is essentially a contagious disease, and exhibits all the phenomena of a mally which, being communicated from one individual to another, is more or less under the control of human action. Under these circumstances, it is impossible for the Government to stop such a disease by mere enactment, or for medical men to superintend efficiently arrangements for the prevention of its spread. It is only by the intelligent apprehension on the part of the public who are infected, that any hope of the arrest of the disease can be expected. We therefore take this opportunity of addressing the public on the subject. Unless heads of families and the public generally are acquainted with the real nature of this disease, no external organization of any kind is sufficient for its control.

We need not refer here specifically to the returns of the Registrar-General, to show how fearfully prevalent scarlet fever has been. In London the weekly mortality has been as high as one hundred and ninety in a week, giving a mortality for London alone of nearly ten thousand a year. Professor Huxley, in his late address at Liverpool as President of the British Association, says that in the years 1863, 1864, and 1869, ninety thousand persons were killed in England and Wales by scarlet fever. These figures point to a much higher mortality for scarlet fever than we have ever had to record for cholera. The point most remarkable about this mortality is, that while death from cholera has agitated every community, no public anx-

iety has been manifested about scarlet fever. Every one has submitted to it as a necessary evil, and no one has made any efforts to diminish its prevalence.

Yet, when we come to inquire into the nature of scarlet fever, and the laws of its distribution, there seems to be no more reason why it should prevail among us than plague, small-pox, or cholera, whose laws of distribution we now know, and on which we can exert the most obvious control. Scarlet fever is a contagious disease, and it is not too much to say that we have all contagious diseases under our positive control. Their nature, and the laws of their distribution, are so well known, that it is possible to teach the humblest individual interested in their destruction the means by which it may be effected.

We need not here enter into the discussion of the nature of "poison germs," of "microzymes," or other ultimate forms which the poisons of contagious diseases may assume, but we may affirm that in every body affected with scarlet fever there is produced poisonous matter, which, passing from the diseased body, is capable of generating anew the same disease as that which affects the body from which it is derived. The proofs of this are so abundant that we can not for a moment admit that the question is open to discussion. The point of most importance here is to know how long the "poison germs" of scarlet fever retain their vitality—the terrible power of starting anew the changes of which they are the offspring. With regard to scarlet fever, we have more evidence of these "poison germs" retaining their vitality than with many other contagious diseases. Sir Thomas Watson, in his classical lectures on the "Practice of Physic," mentions a case in which a piece of flannel worn round the neck of a scarlet-fever patient, being accidentally discovered two years after, and applied to the person

of a servant in the family, produced an attack of scarlet fever. Were it necessary, I could mention several instances, coming within my knowledge and reading, of the scarlet-fever poison lying dormant in woollen clothes for years, and not having lost its vitality, or power of communicating the disease.

Another point of importance with regard to the scarlet-fever "poison germs," is the length of time which a person once affected with scarlet fever is capable of communicating the disease to others. When a person has got well of scarlet fever as far as general health goes, it is by no means the case that he is no longer capable of communicating the disease, but many days after he is strong and apparently healthy, he is capable of disseminating "poison germs" from his body. A recent instance has been recorded in one of our journals, of the prevalence of scarlet fever in families supplied from the milk of a particular dairy. On searching inquiries being made, it was found that the persons connected with the farm from which the milk was supplied, had been affected with scarlet fever. Although they had not been allowed to milk the cows till they had recovered from the scarlet fever, it was, nevertheless, found that they had been engaged in this occupation while the effects of scarlet fever in the desquamation of the cuticle of the skin was still going on. There are abundant other examples on record to show that until the desquamation of the cuticle which always follows scarlet fever is complete, no person who has had scarlet fever is safe from giving it to others.

Such being the nature of the poison of this disease, what ought to be known in families where it breaks out, and what to be done as the result of this knowledge to prevent its spread? It is no use saying that the doctors will give all necessary directions. In the first place, it may be said that the doctor in nine cases out of ten will not give any directions at all. It is not his interest to do so; and if it were, he gets no information in his books or lectures on the subject at all. The medical profession is not required by its governing or examining bodies to

know any thing about public health or preventive medicine. In the next place, however admirable may be the directions of medical men, persons utterly ignorant of the nature of disease will fail to carry out the simplest directions given to them. Nothing can be a substitute for a knowledge of the first principles involved in the destruction of "poison germs" in a family attacked with contagious disease.

What, then, ought to be done in a family when scarlet fever, or any other contagious disease, has broken out? In the first place, the entire isolation of the persons attacked should be secured. They should either be removed to a room in the house to which none but the nurse and doctor have access, or the family should be removed to some house of refuge or place where the disease does not exist. It may be urged that this can not be done; but if it be a mere question of expense, it should be considered whether the cost of the deaths, the funerals, and the doctor's bills of a family of several children, and perhaps the father or mother may not really, in a money point of view, be greater than any cost of isolation.

But whether isolation is attempted or not there is another set of facts which must be borne in mind. The "poison germs" of which we have spoken can really be destroyed. Left alone they can lead a life of poisonous activity. We have the means of killing them—poisoning them in their birth, as it were—by certain substances whose properties we well know. We can not here write a history of disinfectants, but they are well known, and the advertising sheets of every newspaper will afford information with respect to them. The most common and available are carbolic acid, permanganates of soda and potash (Condy's Fluid), chlorinated lime or soda, chloride of zinc (Burnett's Fluid), chloride of aluminium (chloralum), sulphate of iron, and others. These agents have the power of destroying the poisonous activity of scarlet fever germs. In the sick room and around the patient they should be constantly employed. All the sections of the person affected, whether they can

from the nose, the mouth, or other excretory organs, should be immediately brought in contact with one of these agents. All linen and clothes worn by the patients should be placed in a solution of one of them. Nurses attending on the sick, and medical men touching them in any way, should not leave the room without washing their hands in one of these disinfecting fluids.

Woollen clothing that can not well be washed should, by some agency or another, be exposed to heat. It is well known that a temperature of 212 degrees Fahrenheit, the temperature of boiling water, will destroy poison germs. Woollen clothing of all kinds, such as shawls and mantles, men's clothes, as also curtains, hall-pulls, carpets, rugs, and beds, should be placed in ovens, or by some contrivance or another exposed to a heat above 212 degrees. In St. James's, Westminster, a disinfecting apparatus has been erected in the Workhouse yard, where the various articles can be disinfected.

Having thus indicated general principles, I must leave details. I am convinced that the holocaust of victims that we annually offer to this Moloch of scarlet fever arises from ignorance, and that a general knowledge alone of the facts above stated can suffice to drive from us this plague, so disgraceful alike to our intelligence and our humanity.—*E. Lankester.*

AN ULCER CURED BY A DOG.—*To the Editor of THE HERALD OF HEALTH:*—Some time in the month of February, 1864, I was called to see an elderly man—say 60 to 65 years of age—named Jacob Hawk, a Pennsylvania Dutchman, whom I found in his parlor. On entering he said: "Doctor, here is a very sore arm for you; I have had many doctors to treat me, but here it is. By this time he had the bandage removed from it, and just at that moment a large dog got up and walked over to his master, as he held the arm exposed, filled with bloody pus-looking stuff—a bad looking ulcer indeed. The dog offered to lick it, but he ordered him away. I said: "Let him lick it off, if he will; I can see it better." "Here,

Watch!" The dog walked up, went to work and licked it clean and nice from the shoulder to the wrist. The man seemed to experience considerable pain, but I kept his attention by getting an explanation of how long the sore had been there, the cause, etc. When the dog had finished, he retired to his resting-place on the rug in the room, perfectly contented. In answer to an inquiry as to the cause of the ulcer, he said: "I was bitten by a garter snake in harvest. My arm did not pain me much, and I did not tie it up; but after a while it became very much swollen. I doctored myself for some time, and then went to Dr. A., who said he would cure it in six weeks, but got worse instead of better. Then for one month I was under the care of Dr. B., but experienced no change for the better. I then used three or four bottles of patent medicine, but it did not help me. I began to think it a very bad case. Finally, I tried a German doctor; have taken medicine, but it still remains uncured. I have sent for you to ask what you think of it." The arm presented a general ulcerated surface. I indeed thought it, as the man himself remarked, "a bad case." I ordered him to let the dog lick it three times a day, and if necessary apply a little lard to it to induce him to lick it faithfully, and after each operation to apply a cloth moistened with melted lard and salt. I told him to call at my office in ten days. I did not see him for about six weeks, when in he came, saying: "Good evening, Doctor. I am well! How much is your charge?" (To tell all the facts, when I went to see him he had paid out so much, he said, and with no good result, that he would give me one hundred dollars if I cured him, and nothing if I did not.) Said I: "One hundred dollars—what you offered." "Oh, that is too much; I will give you twenty-five dollars." "All right." I took a good look at the arm—it was well and entirely healed up. I have no doubt as to the dog being the instrument of cure. I told some of my medical brethren, but it did not seem to impress them favorably, and so it has remained ever since, as above stated.—*James M. Hols, M. D.*

Food for Mirth and Thought.

A VERY EXTRAORDINARY PERSON.—The following is said to have been copied literally from an old tombstone in Scotland :

"Here lies the body of Alexander Macpherson,
Who was a very extraordinary person,
Who was two yards high in his stocking feet,
And kept his accoutrements clean and neat.

He was slew

At the battle of Waterloo

Plump through

The gullet ; it went in at his throat,
And came out at the back of his coat."

CAST-IRON STOVES.—Against close cast-iron stoves there lie the serious objections that they do not afford proper ventilation ; that when coal is used they are liable to emit deleterious gases ; that in giving them fuel and removing ashes they introduce an irritating and disagreeable dust (an objection which also lies against open fire-places and grates), and that it is difficult to maintain an equable temperature by their use. They, nevertheless, from their small cost and the possibility of their use in small apartments and situations where more perfect apparatus can not be employed, enjoy a wider favor than any other form of heating apparatus in use, and are doubtless destined to maintain their popularity, unless some inventive genius shall give to the world something which combines their advantages with the removal of their defects. We are certain such an invention could not fail to secure at once universal favor and adoption.—*Scientific American*.

A HOMŒOPATHIST FRIGHTENED.—A Homœopathist, having laid in a supply of his kind of medicines, feeling unwell, went to take one of the globules, and by accident took two. He was greatly alarmed, and, there being no Homœopathic doctor near, he, in his extremity of fear, called in an Allopathic doctor to see if he could do any thing for him. The doctor looked

at him and his pill in despair. He then poured a dozen or two into his hand, and said : "I can not help you, but I can die with you, and swallowed them all. No evil following, the frightened man went on his way rejoicing.

ANTI-VACCINATION.—The anti-vaccination movement is making rapid progress all over England. R. B. Gibbs, Esq., Secretary of the Anti-compulsory Vaccination League, has many calls to attend meetings and deliver lectures. He has recently been in Ireland, and found that the assertion so widely made that vaccination had stamped out small-pox is erroneous, as multitudes of children remain unvaccinated. The fact that 96 per cent. of the small-pox patients in Paris have been vaccinated has made a profound impression on the mind of this country.—*Human Nature*.

A MAN WITHOUT A SOUL OR BODY.—Here is a quaint anecdote from the biography of Dr. Marshall Hall : Dr. Wilkins had lent Dr. Hall the well-known book, "Body and Soul," and, as it was not returned in due time, he sent this note : "Dear Doctor, do send back my Body and Soul ; I can not exist longer without them." The servant who received the note read it (as servants sometimes will), and, horror-stricken, rushed into the kitchen, crying : "Cook, I can't live any longer with the Doctor !" "Why, what's the matter ?" "Matter enough," replied the man ; "our master has got Dr. Wilkins's *body* and *soul*, and I don't dare to stay where there are such goings-on !"

A BRAVE IRISHMAN.—An Irishman, being afflicted with the toothache, determined to have the old offender extracted, but there being no dentist near, he resolved to do the job himself, whereupon he filled the excavation with powder ; but being afraid to touch it off, he put a slow match to it, lighted it, and then ran off to get out of the way.

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Short Heeled Shoes and Flat Feet.

—The fashion of wearing short and high-heeled shoes is a very injurious one to the shape and use of the feet. A short heel does not support the arch of the foot, but allows it to sink, stretching and weakening the ligaments that hold the bones of the arch together, and making the person flat-footed. The purpose of the arch of the foot is to give elasticity and spring to the feet, and prevent sudden shocks being transmitted too abruptly to the body and brain. A person with a high-arched foot steps lighter, easier, and more gracefully, can walk with much less fatigue, and run and jump much better than a flat-footed person. Thousands of people lose their natural ease and grace of motion, and become stiff and awkward walkers, simply from wearing short-heeled shoes, and thereby losing their natural elasticity of step. The matter is made still worse by having the heels very high, as well as short. Another effect of flattening the arch of the foot is to increase its length, and the foot is often lengthened in this way to the extent of half to three-quarters of an inch. Short and high-heeled shoes also readily permit the easy turning over of the ankle, and many a strained and weakened ankle is the result of them. Ladies are the greatest sufferers from this foolish fashion, but men suffer also to some extent. The heel is usually made at least twice as high as it should be, and oftentimes not more than half as long. They can in all cases be safely made from one half to three-quarters of an inch longer than they are. In conclusion, if you value the appearance of your feet, the ease and gracefulness of your step, and the strength of your *understanding*,
LOOK TO YOUR HEELS.

How to Remove Hair.—"As you give valuable 'Answers to Correspondents' in THE HERALD OF HEALTH, perhaps you would have the kindness to tell me what will remove hair permanently. I have been told to pull it out, but it grows in about as fast as I pull it out."

The least injurious way is to continue pulling it out, until the glands about the roots of the hair become so weakened as to be unable to reproduce it. Two or three times pulling out will be sufficient with some, while others may have to repeat it half a dozen times or more.

Dizziness—Its Cause and Prevention.—"What is the cause of sudden attacks of dizziness, and how can they be prevented?"

The condition existing in cases of dizziness is an unnatural pressure of the blood upon the brain. The exciting causes are usually some sudden exertion or hurried motion, as rising quickly from a recumbent position, stooping, etc. Unaccustomed motions, as sailing, swinging, walking circularly, riding backward, etc., often occasion it, even in healthy persons. The predisposing causes are either such as produce an undue thickness or viscosity of the blood, as torpidity of the excretory organs, particularly the liver, and excessive alimentation, or those that cause an unnatural thinness of the blood and weakness of circulation, as hemorrhage, an insufficient quantity of food, protracted disease, etc. The preventive treatment should be such as to restore the blood to its normal condition and equalize the circulation. Where the blood is thick and impure, the diet should be very plain and simple in quality—composed largely of fruit—and abstemious in quantity. Active out-door exercise and a thorough course of bathing are also indicated. Where the opposite condition exists, the indications are to nourish and strengthen the body, and equalize and invigorate the circulation. To this end the patient should have an abundance of pure air, as much nourishing food as can be digested and assimilated, and a moderate amount of daily exercise.

Rules for the Examination of Recruits.—The following rules for the examination of army recruits were established by Kettelle, a celebrated German army surgeon, and will prove interesting as showing the comparative measurements of different parts of the

human body, its proper height, weight, etc. :
 "A man should measure around his thorax at least half his height.

"Minimum age, 20 years.

Minimum height, 5 feet, 4 inches.

Minimum weight, 125 lbs.

"A man 5 feet high must weigh 100 lbs., and measure around the chest over the nipples one-half his height, or 30 inches. For every additional inch in height he must increase 5 lbs. in weight, and the weight must increase in proportion as the age increases.

"A man *may* measure around the thorax two-thirds of his height.

"The weight must increase with the size of the chest as well as the height.

"The maximum distance around the chest is 45 inches.

"The maximum weight is 240 lbs.

"No restriction as regards height.

"The distance from nipple to nipple is one-fourth the distance around the chest.

"The antero-posterior diameter of the chest is one-fourth the circumference.

"From acromion process to acromion process one-half the circumference.

Size of head not less than 22 inches in circumference."

Position of the Head During Sleep.—"Should the head be elevated or upon a level with the body during sleep; or, in other words, are pillows and bolsters useful or injurious?"

The head should be in the same relative position with the body during sleep as when the person is sitting or standing. Consequently, when lying upon the back, no pillow or bolster is needed. When lying upon the side, a pillow of sufficient size to keep the head upon a line with the spine should be used. If the head is raised above the level of the body, both respiration and the circulation of the blood are interfered with in proportion to the degree of elevation. The air passes to and from the lungs, and the blood to and from the heart, in tubes contained in the neck. Now take a straight tube of any kind, and a certain quantity of air or liquid, at a certain pressure, will pass through it in a given time; but if you bend the tube as the tubes in the neck are bent by having the head elevated, the quantity of air or liquid which will

pass through in the same time with the same pressure will be diminished, and the greater the bend the greater the obstruction. Twisting of the neck also interferes with the respiration and circulation by diminishing the capacity of the trachea and blood-vessels.

How to Cure a Cold.—Upon the first indication that you have taken cold, stop eating until the cold is cured; drink freely of cold water; induce a free perspiration over the entire body, either by exercise, the Turkish, vapor, lamp, or hot-water bath or wet-sheet pack, followed by a tepid spray or sponging; go to bed, cover up warm, and breathe all the pure air you can. Nine cases out of ten will yield to this treatment in less than twelve hours, and the tenth one will hardly continue twenty-four hours.

Liver as Food.—Do you consider liver worse than other animal food because it is an organ of excretion?"

The liver and kidneys are most unhealthful parts of an animal, for the reason that they are constantly charged with the worn out excrementitious matters of the system. This is why they are the parts first subject to decomposition.

Eating Before Retiring.—"Please inform me whether it is injurious or not to eat any thing before retiring. It does not seem right to me, but the desire for something to eat about that time is so strong (although I eat a moderate supper) that I am in doubt."

It is very injurious to eat just before retiring. The desire for it is simply the result of habit or of a morbid craving—the result of disease—and should be at once overcome.

HOW TO PREVENT INJURIES FROM RUNAWAY HORSES.—An Englishman writes as follows:

"A complete electric apparatus can be purchased in a small case. Let one of these be fixed in an out-of-the-way nook in the carriage, two wires to hook to harness, beneath which have two very thin copper plates properly placed. In the event of a runaway, the driver and inside occupants would only have to press a glass knob to stop instantly the mad career of the strongest horses. It could be adopted for equestrians also."

NOTICES OF NEW PUBLICATIONS.

WHY AND HOW, OR WHY THE CHINESE

EMIGRATE; and the Means they Adopt for the Purpose of Reaching America. With Social Customs, etc. By Russell H. Conwell. With Illustrations by Hammett Billings. Boston: Lee & Shepard, Publishers. New York: Lee, Shepard & Dillingham.

Our Republic has been more or less the asylum for almost all peoples on the face of the earth, who have come here, driven out by the oppression of rulers, or because their own native land afforded no field for the growing intelligence of the masses. The hardy and impulsive Hibernian bent his pliant back to carry the hod and become a welcome medium for the building of our houses and the construction of our railways. The cheery Teuton plows our fields and contributes a healthful element to our growing nationality. Except the Irish little can be said in favor of the more limited ingress of the Celtic nations, who by the cheapness of their labor crowd our native young men out of counting-rooms, and away from the official desk. These immigrants belong to christianized peoples and were welcomed without a demur.

But there is now landing upon our shores an altogether different type of the race—representatives of another type of man, Mongolians, not Circassians—Pagans, not Christians, and in this emergency our people naturally ask their eyes and ask, Why and how these new and strange people leave their homes to settle among a race ignorant of their language and opposed to their kind of religion. It is currently reported and believed that Boston merchants lent themselves to the infamous Coolie trade, carried on for the last thirty-five years in order to supply labor for the Peruvians, Cubans, etc. Of this however we have nothing to say—to the honor of our Government be it stated that, by acts of Congress in 1863, was totally prohibited, under heavy penalties, the importation of Coolies (Chinese term for laborers), under what was called the Apprenticeship System. This method, under pretext of employing the Coolie a certain number of years at good wages, after having deducted therefrom his passage fee, ended, in fact, by consigning the unhappy being by false representations to a bondage more cruel and more hopeless than that of the African slave, inasmuch as he was deprived of all domestic relations. Under this cruel system hundreds of Coolies mutilated at sea perished in the middle passage, and finally committed suicide rather than endure the pangs of exile and servitude.

Congress forbade all except voluntary immigration, and stipulated that in no case should a Coolie be allowed to enter shipboard till his passage-money was paid, besides making other provisions still farther to protect and secure the rights of the emigrant. Notwithstanding all this, slaves unquestionably creep in, and evasions of the law exist, for bad men will find a road to iniquity for the sake of gain in spite of the most stringent measures.

No immigrant lands upon our shores under so many disadvantages as the Coolie, and at first sight it would seem that these impediments would be enough to prevent him coming at all, or almost drive him to despair when once here. This, however, is by no means the case. The round, stolid face of the man, with his shaved front and ridiculous pig-tail, betrays at once the unit from an effete

civilization, whose thirty centuries have culminated in four hundred millions of grown up, mechanical babies, utterly incapable of further progress. At some time or other he has anticipated all the inventions and discoveries of all other peoples, if we except the Telegraph, the Railway, and the Steamer, yet his isolation and foolish conceit have prevented him from making any very effective or progressive use of his inventions, for the lack of other people to "rub his head against" and suggest new ideas.

Those of us who saw the Chinese junk, which many years ago entered the harbor of New York, will realize the force of this observation, for never was seen a more innocent, helpless piece of mechanism designed to float upon the sea, than this pretentious craft with its clumsy paraphernalia for steering and its receptacle for the terribly hideous Joss.

The first considerable immigration of Coolies was under the auspices of the Pacific Railway Company, who imported great numbers for the purpose of completing, perhaps, the most stupendous enterprise of modern times. It is believed this Company redeemed their pledges to the Coolie—paying him for his labor, so that he could return with a full pocket to China, or religiously returning his embalmed body to the Flowery Kingdom, there to repose by the side of his dead ancestors, and in the spiritual world promote the interests of his family and friends.

Of course, in this Chinese immigration we have only the lower classes, and yet by no means an unintelligent class of men. The Coolie is patient and laborious, imitative to the last degree, and cunning. His trade or profession being hereditary, he has for generations developed its highest capabilities, and can practice it well nigh by instinct, like the beaver, the ant, and the bee—hence the perfectness of his imitative powers. Question, as we naturally do, the consequences of this Pagan element among us, from what we have said it may be inferred that the Chinaman is by no means a bad sort of a man to receive in the midst of us. We, who have stood the ordeal of the African slave, with his Jumbo mysteries and Fetish worship; the Mormon, with his plurality of wives; the Perfectionist, with his Community of wives, may well endure the pig-tailed Chinaman with his joss-sticks and lanterns. More than this, he has one or more beliefs which may vie in beauty with the graceful mythology of the Greeks. His kitchen god, for whom he puts aside little dabs of rice and melon, is no other than the Hestia of the Greek, and the Penate of the Roman; and the classical Hamadryades are revived in his worship of a beautiful tree, in which he believes some good god has made his habitation, and under which he builds his hut, surrounding the tree with burning joss-sticks.

The Coolie feels it his bounden duty to return home at some time, and often finds himself pledged to a limited period. As a religious man, he desires that his bones should repose on his native soil, for he believes the old cemetery is blessed by the presence of Fung Shuy, and that his ancestors being buried there insure prosperity to all of his descendants. More than this, he believes that unless his body is able to repose there, his soul will wander for ages homeless and disconsolate, and in danger of a miserable and degrading eternity; as a moral man

is bound to return, for he has debts there which the Chinaman thinks it disreputable to evade the payment of; and his wife and children being to all intents and purposes his slaves, he has, most probably, pledged the family as security for his passage-money, and unless he faithfully comes back to redeem them, they will be sold into a hopeless bondage. Then, too, the laws of China forbid a married woman to leave the country, and he must return if he would see her again.

The Coolie is literally driven out of his own country by the mismanagement of its Government. The police may arrest him for crimes he has never committed, to extort from him a bribe, or at the instance of an enemy; the tax collector may seize his coat, his rice, or the bones of his ancestors, to induce him to pay his extortionate levy; and the landlord so reduces the wages of the laborer that he is, in fact, a slave to any body who would give him rice on which to feed himself and family. His wretchedness at home has become past endurance, and he could be no worse off abroad.

It is probable that in the course of time the Chinese will outgrow many of their superstitions, and not improbable that the good Fung Shny may migrate to some favored locality in this country, and there make hallowed

some lovely burial spot where the bones of the Coolie may repose under the favor of the gods and the blessing of his ancestors. They have done this at Singapore, and the precedent may be followed here.

The Coolie makes a very neat, orderly servant. He minds his own business, and as a general rule is honest. He does not openly steal, but his cunning will find many ways to appropriate. His pride is exacting and irascible; hence he does not tolerate fault-finding, and can not stand abuse, but is grateful for kindness, and appreciates praise.

On the whole, we incline to the pig-tail barbarians, such they can be called; we cotton to the joss-sticks, the gongs, and little pagodas. If we do not do so, it will no matter any more than a straw would stay Niagara, for the tide is streaming in our direction, the advance corps of a few thousands to be swelled by the discontented, half-starving population from a country numbering four hundred millions.

The book before us is a lively, well written treatise of a subject which must more and more engage the attention of our citizens and our legislators. How it will stand it is not wise for us to predict, but we believe it may safely be left in the hands of Him, who ordereth human events, and over-rides all for the best good of the many.

THE PUBLISHERS' DEPARTMENT.

Contributors to this Number.

NATHAN ALLEN, M. D.,
W. T. CLARKE,
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REV. CHARLES H. BRIGHAM,
MRS. E. E. EVANS,
EDGAR FAWCETT,
MRS. H. O. BIRDSALL,
REV. HENRY WARD BEECHER,
E. RAY LANKESTER, B. A.,
JAMES M. HOLE, M. D.,
DR. A. L. WOOD, and
THE EDITOR.

This Number.—We call the special attention of our readers to this number of our monthly. Great pains have been taken to prepare a programme for 1871 which shall be comprehensive and valuable, and the number before the reader is, we think, but an indication of what we shall be able to do during every month in the year. The general articles are all by writers and thinkers who have something good to say. We have opened a department devoted to Hygiene, which will during the year be filled with matter of great value to our readers. There will also be a department devoted to Recipes for healthful food, which will interest all. We believe that no number of our monthly has yet gone forth with a greater variety of more interesting material than this. We send it forth to our thousands of readers with a hearty wish that it may prove a messenger of good.

Notices of the Press.—We call special attention to the notices of Mrs. Gleason's book which we have received from persons who have read it, and from the newspaper and magazine press. It is rarely that a work of this character has been so well received.

Facts for the Ladies.—My Wheeler & Wilson Machine has been in use nearly eleven years without any repairs. Five and a half years ago I set No. 1 1-2 needle, which has not been changed since. The machine has been used by as many as seven or eight different persons during that time, and has made dresses, shirts, boys' jackets and pants, tucked and hemmed cotton cloth, linen, Nanook and Swiss muslin, without either tucker or hemmer.

Adrian, Mich.

MRS. H. HART.

A Good Sewing Machine is given free for a club of 30 subscribers and \$50. This premium is very popular. If there is a poor, deserving family, your neighborhood help it to get a good sewing machine by subscribing at once. Perhaps your minister's wife wants one. If so, help her to get it, by helping her to get up a club. The Empire is one of the best sewing machines in use, and we are sure that it will give you great satisfaction.

Talks to My Patients.—Read what the Press say about this valuable book:

After reading the whole of this book, we pronounce the most admirable and excellent that we have ever seen of its class. It is written for women. The style is pleasant and readable, and it is full of wise counsels and suggestions regarding the very things in which so many people most need assistance. It is a safe book for young people to read, for any body, indeed, and this can be said of very few books devoted to such subjects. There is no sentence in it that can be perverted, or misused, so as to do any harm. We wish the book could be read in every household in our country.—*Liberal Christian, N. Y.*

A book that contains much new and valuable information; no nonsense in it.—*San Francisco Alta California*

Notice to Our Correspondents.—

The following hints to correspondents should be observed in writing to us:

1. ALWAYS attach name, Post Office, County, and State to your letter.
2. SEND MONEY by Check on New York, or by Postoffice Money Order. If this is impossible, inclose Bills and register Letter.
3. CANADA AND NEW YORK CITY SUBSCRIBERS should send 15 cents extra, with which to prepay postage on subscriptions to THE HERALD OF HEALTH.
4. REMEMBER, if you are entitled to a Premium, to order it when you send the Club, and inform us how it is to be sent.
5. REMEMBER THAT WE NOW GIVE the *Empire Sewing Machine* as a premium. It is guaranteed to give good satisfaction.
6. REMEMBER TO SEND in Clubs early.
7. REMEMBER TO LOOK at our Premium List and Book List, and see exactly what we give and have for sale.
8. REMEMBER that for the names and addresses of 25 persons, either invalids or friends of Temperance and Health Reform, we give Prof. Wilson's book on the Turkish Bath. It contains 72 pages.
9. STAMPS should be sent to prepay postage on letters that require an answer.
10. Those who want a good *Spirometer*, *Parlor Gymnasium*, or *Filter* for making their water clean, will find the prices in another column.
11. INVALIDS from all parts of the country are invited to write to us for our circular, and full particulars as to Treatment or Board in the Hygienic Institution, See advertisement elsewhere.
12. See List of Books elsewhere.

Books C. O. D.—Parties who order books will find it cheaper to send the money with the order, than to order C. O. D., as in this case the cost of collection will be added to the bill. This is considerable, when the money has to be returned from a distant point. Those who order C. O. D., should send one-fourth the value of the order in advance to insure prompt attention.

Caution.—Our friends in writing to us will please be very particular and give Postoffice, County and State with every letter, and not depend on us to remember where they live, though they may have told us a hundred times. Those who think we can turn to our books and find their names and address without trouble, are quite mistaken.

Home Treatment.—Invalids wishing prescriptions for home treatment can have them for Five Dollars. They should send full particulars of their cases. Any person sending five new subscribers to THE HERALD OF HEALTH and Ten Dollars, will, if he does not choose other premiums, be entitled to a prescription for treatment free.

The Address Label.—By this method our subscribers can keep their own accounts as to when their terms of subscription close; for instance, if the printed slip has "De71," or "Jo72" added to the name, it signifies that the subscriber's term of subscription expires with the December number of 1871, or the June number of 1872, and so on *et seq.*

Our Premiums.—We shall be careful to send out as Premiums nothing which is not all that we claim for it in value. No cheap, second-hand, or indifferent article will be used.

CLUBBING

WITH OTHER MAGAZINES.

We will send THE HERALD OF HEALTH and any one of the following Journals one year for the sum below mentioned. The order and money for both must be sent at the same time.

THE HERALD OF HEALTH, \$2 00, and

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Harpers' Monthly.....	4 00 for 5 00
Harpers' Bazar.....	4 00 for 5 00
Harpers' Weekly.....	4 00 for 5 00
Phrenological Journal.....	3 00 for 4 00
Our Young Folks.....	2 00 for 3 50
New York Tribune.....	2 00 for 3 35
American Agriculturist.....	1 50 for 3 00

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How to Send Money.—In making remittances for subscriptions, always procure a draft on New York, or a *Postoffice Money Order*, if possible. Where neither of these can be procured, send the money, but in a *Registered letter*. The present registration system has been found by the postal authorities to be virtually an absolute protection against losses by mail. All Postmasters are obliged to register letters whenever requested to do so.

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of Job PRINTING: such as Pamphlets, Circulars, Envelopes, Bill-heads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing stamp for reply.

Talks to My Patients.—Mrs. Gleason's book, advertised and noticed elsewhere, is meeting with a good sale. We can supply it to subscribers and agents in any quantity. A good many ladies are selling it with success. We should like to have in every town a good Lady Agent. For particulars of agency, write to the Publishers.

Wanted.—Will our readers please send us brief items of news and experience referring to Health and Physical Culture topics. Make them pointed and practical, and we will publish them for the benefit of others. Do not mix them up with business or personal matters but on separate sheets of paper and in readiness for the Printer.

Clubs of Twenty-five.—Any person who will send us at one time twenty-five new subscribers to this monthly, shall have them for Twenty-five Dollars. Remember they must be new subscribers, and all be sent at one time.

New Premium List for 1871

NOW IS THE TIME TO BEGIN!!

OCTOBER, NOVEMBER, & DECEMBER NUMBERS FREE

TO NEW SUBSCRIBERS!

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For 300 Subscribers and \$600

We will give A BRADBURY PIANO, worth \$600!

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We will give ONE OF ESTEY'S FIVE-OCTAVE COTTAGE ORGANS, Black Walnut, Double Reed, Harmonic Attachment, and Manual Sub Bass, Three Stops, worth \$200!

For 85 Subscribers and \$170

We will send ONE OF MASON & HAMLIN'S FIVE-OCTAVE ORGANS, worth \$125, with Five Stops, Viola, Diapason, Melodia, Flute, Tremulant, with two sets of Vibrators throughout, and Knee Swell.

For 50 Subscribers and \$100

We will give A LADY'S ELEGANT GOLD WATCH AND CHAIN, worth \$75.

For 30 Subscribers and \$60

We will give A SPLENDID EMPIRE SEWING MACHINE, worth \$60. This is as good as any machine in the market, and can not fail to give the best satisfaction.

For 25 Subscribers and \$50

We will give A SPLENDID WILSON SEWING MACHINE, half case, worth \$50. This is the same style of machine that other Companies sell for \$75.

PICTURE PREMIUMS.

For 8 Subscribers and \$16

We will give one of Prang's Beautiful Chromos, entitled "STRAWBERRIES AND BASKET;" size, 15x18 inches; value, \$7.50.

(This is a large and very handsome picture, quite equal to the original oil painting from which it is copied, which was valued at many hundred dollars.)

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We will give Prang's Splendid Chromo, entitled "THE KIDS' PLAYGROUND;" size, 11x18 in.; value, \$6.

(This is also a very handsome gem of art, and will greatly delight any family that may own it.)

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We will give one of Prang's Chromos, entitled "THE BABY; OR, GOING TO THE BATH;" size, 7x10 inches; value, \$3.

For 3 Subscribers and \$6

We will give one of Prang's Chromos, entitled "PIPER AND NUTCRACKER," valued at \$2.

(This is a very popular picture after Landseer, a sufficient recommendation to any work of art.)

If our friends wish to ornament their homes with beautiful works of art, at small expense, these offers of pictures will suit them. We guarantee the pictures will give perfect satisfaction.

BOOK PREMIUMS.

For 60 Subscribers and \$120

We will give the NEW AMERICAN ENCYCLOPEDIA in 20 volumes, worth \$100!

This great work is a complete library of itself, and of reference or information ought to be in the hands of every family.

For 15 Subscribers and \$30

We will give ONE OF WEBSTER'S PICTORIAL UNABRIDGED DICTIONARIES, illustrated with 3,000 Cuts, worth \$12.

For 10 Subscribers and \$20

We will send two of Prang's Chromos, entitled "MORNING" and "EVENING;" size of each, 12x18 inches, value, \$10.

The above pictures are copied from Rosa Bonheur's wonderful paintings known by these names. They are companion-pictures, and ought to go together. No description can do them justice.

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We will give A BOUND VOLUME OF THE HERALD OF HEALTH for 1867, 1868, and 1869.

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2 Subscribers (1 Old, 1 New) and \$1

A copy of "A WINTER IN FLORIDA," worth \$1.

Premiums to Each Person in the Club

There are many persons who would like to send Subscribers to THE HERALD OF HEALTH without thought of personal reward, but for the good they can thus do. Thus we make the following enticing offer:

For 25 Subscribers and \$50,

All sent at one time, we will give to each THE HERALD OF HEALTH for one year, and a copy of either of the following new works, viz.: "Winter in Florida," value, \$1.50; "Talks to my Patients," value, \$1.50; or The American Agriculturist for one year, value \$1.50; or, if 35 cents be added to each name, The New York Weekly Tribune for one year, valued at \$2. Bear in mind that the 25 names and the \$50 must all come at one time.

SEE PAGE 47 FOR CLUBBING.

Address

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ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 5 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, \$12; one column, \$22; one page, \$40. All advertisements must be received at this office by the 5th of the month preceding that on which they are to appear.

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See Book Advertisements,

read them carefully, and then ask yourself if you can use your money to better advantage than to purchase, read, and become possessed of information highly important to your well being for ever.

WOOD & HOLBROOK, 15 Laight St., N. Y.

1871.

THE

National Standard.

Published every Saturday.

An Independent Reform and Literary Journal.

AARON M. POWELL, Editor.

WENDELL PHILLIPS, LYDIA MARIA CHILD, REV. JOHN T. SARGENT, HON. GEORGE W. JULIAN, FREDERICK DOUGLASS, MARY GREW, JULIA WARD HOWE, LOUISA M. ALCOTT, COL. T. W. HIGGINSON, and others, contributors.

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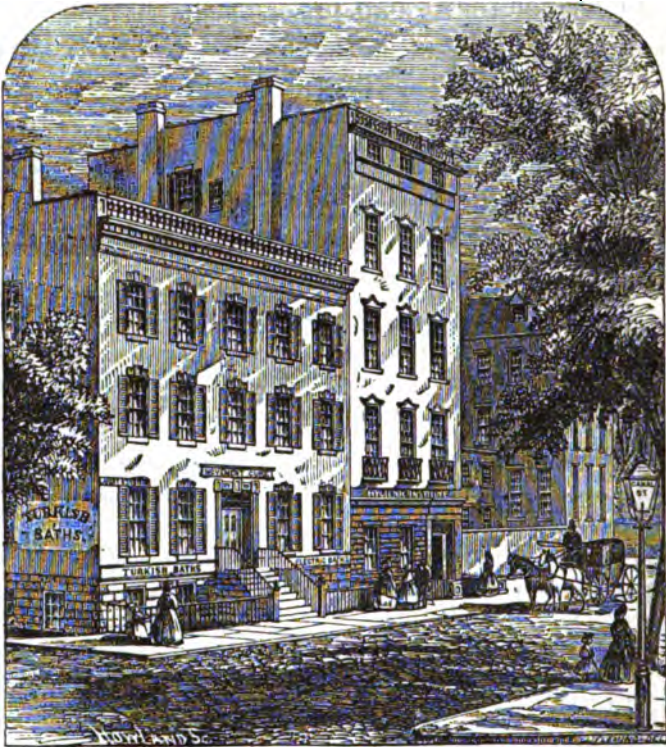
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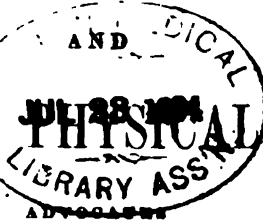
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CONTENTS FOR FEBRUARY, 1871.

GENERAL ARTICLES :		Page	
Alcoholic Stimulants as Affecting Mental- tality— <i>Nelson Sizer</i>	49	A Meritorious Article—Miss Garrett— Monopoly by Male Medical Students	82
Habits of Study— <i>Rev. Charles H. Briggs</i>	62	Hygienic Houses in New York City— A Veteran in the Cause	83
Crumbs from the British Scientific As- sociation— <i>Dr. Lydia F. Fowler</i>	67	Diet for Children—Educated Nurses— A New York Lady—Surgeon in Paris	84
The Physiology of Man— <i>M. L. Edgeworth</i> , M. D.	62	Amount of Water Needed for Daily Use—What is, and What Causes Consumption—Healthiest Town	86
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Burdall</i>	66	HOW TO TREAT THE SICK :	
The Various Kinds of Longevity— <i>E. Ray Lankester</i> , B. A.	69	How to Get the Most Good out of the New Hygienic Treatment	86
The Wooing (A Poem)— <i>Houghton</i>	72	Painter's Colic—Headache—Bee-stings	88
Notes about Thought— <i>F. B. Perkins</i>	74	FOOD FOR MIRTH AND THOUGHT	89
Studies in Hygiene	76	ANSWERS TO CORRESPONDENTS :	
Recipes for Wholesome Cooking—Pies, the crust, etc.	80	Weak Lungs—Position during Sleep— Horseback Riding—Cold Feet, etc. .	91
EDITORIAL DEPARTMENT :		Tomatoes as Food—Impure Blood— Drugs and Fever—The Forehead, etc.	92
1. The Best Governed Place in the World	81		

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VOL. 17, No. 2.]

NEW YORK, FEBRUARY, 1871.

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No. IV.—ALCOHOLIC STIMULANTS AS AFFECTING MENTALITY.

BY NELSON SIZER.

EVERY body knows that alcoholic stimulants affect the brain to a greater or less degree; and few have failed to notice that their effects differ widely with different individuals. The general effect of all stimulants is to increase the circulation of the blood, accelerate the pulse, and throw the blood upon the brain in great abundance. The first result is mental excitement—an abnormal action of the mental functions.

As the brain is the instrument of all the mental forces—and as the intellect, the sentiments, the propensities, affections, and passions emanate from or are acted out through this great nerve-center, it is of the first importance that the brain be healthfully sustained by adequate and proper nutrition, and preserved from all undue excitement and stimulation.

Whenever this delicate organ, the brain, becomes over-excited by any mastering passion or sentiment, it produces a species of insanity, or warped and perverted condition of the mind. Anger, fear, jealousy, shame, or remorse, sometimes takes such a hold upon the man that for

the time being he is utterly beside himself. The reader is fortunate if he has never been so angry as to lose all self-control and all care for consequences. Cautionness or fear, also, is sometimes so wrought up as to deprive one of correct judgment of the condition of things, as well as of all power of appropriate action. These conditions of exalted and unusual action of the faculties are similar to that which occurs in the state of intoxication. The influence of alcoholic liquors varies with the temperament and peculiar mental development of the individual. One class of men have light complexion, and ardor and impulsiveness of organization. These are set on fire by alcoholic stimulants. They will do something when thus excited—they can not help it. Restless, nervous, ardent, and enthusiastic, they are full of action, and a glass or two of liquor puts them on the wing, and they will be ready for a speech or a song, a dance, a frolic, or a fight, differing in each case according to the peculiar development of the brain. Another is dark in complexion, is firm, strong, heavy in build as well as in

spirit, and to arouse him a great amount of excitement is required. In his manifestations he is severe if aroused to violence, and is headstrong, determined, and resistless in his feelings and efforts.

Another has a sensitive, fine, delicate nature, is easily acted upon, enjoys and suffers in the extreme; he lives in the realm of sentiment, and, if exasperated or unduly excited, becomes dramatic and intense in all he does.

On these three leading temperaments or classes of men the effects of stimulants, or of any other excitant, is as varied as are their constitutions. Then, again, individual men of each temperament differ in their mental developments, and each is, accordingly, differently affected. "The sad become sadder; the light-hearted, gay and boisterous; and the ill-tempered, quarrelsome and vindictive. As the poison is increased, ideas become confused, and the reasoning powers so disordered as to produce a condition approaching delirium."

The human organization may be compared with a musical instrument, and the influences brought to bear on that organization may be likened to the one who plays upon an instrument. As musical instruments are of various kinds, and players are as various as the instruments, the music produced is as unlike, as contradictory and peculiar, as are the mental manifestations of different human beings.

One man has a low, broad head. He is easily provoked to anger, restless and impatient. His Combativeness and Destructiveness being large and active, it is all he can do to carry himself without belligerency when he is sober. When stimulated, the excitement is naturally acted out through the strongest propensities, and he is ready to fight his best friend if by any means he becomes provoked; for the time being he is crazed with anger through the abnormal or intoxicated condition of those faculties of force. It is anger unregulated and superheated by intoxication, and, if not temporary insanity, it is but little removed from it.

Another has large Secretiveness, which gives policy and concealment, and, when excited, leads to suspicion and jealousy. When the man becomes heated with liquor that propensity becomes abnormal, his mind is poisoned by mortal jealousy, which is likely to rest on his best friends, and often leads him to abuse or even murder them.

Another has large Acquisitiveness, and when intoxicated thinks and talks of money and property, boasts of his wealth, or quarrels with persons between whom and himself some old

business matter, which was not settled to his entire satisfaction, now breaks out afresh. Sometimes Secretiveness and Acquisitiveness lead the intoxicated man to commit burglary and robbery, which, when sober, would be thought of only to be banished from the mind. Nearly every great crime is committed by persons under the influence of strong drink. Though arson, robbery, or murder may be planned when the head is cool, or comparatively so, the climax is reached, the criminal act is perpetrated only when the brain is heated and the wicked resolution fortified by that bewildering enthusiasm which alcoholic liquors produce.

Nine-tenths of all the licentiousness which curses society is perpetrated under the inflammatory influence of ardent spirits. Acting especially on the base of the brain, where the organs of the animal passions are located, alcoholic stimulants work out their baleful influence chiefly through the passions. If careful note be taken of the great crimes against the person which come under the cognizance of the courts, it will be found that most of the culprits committed their offences when intoxicated. It is notorious that the inmates of the dens of shame are habitual drinkers, and nine-tenths of their patrons and companions in lewdness are temporarily, if not constantly, under the influence of stimulants. The police reports of all cities indicate that rows, riots, and bloody affrays, resulting in manslaughter and murder, as well as crimes against decency, are perpetrated by persons who are intoxicated. If a rare exception occurs it is the wonder of all. We may rise higher, enter political conventions and halls of legislation, and it will be found that the dissensions, strifes, and disgraceful, if not traitorous, transactions frequently occurring grow out of the same fountain of evil—alcoholic stimulants.

Thus it will be seen that the chief crimes and disorders of society, growing out of the perverted activity of the propensities called Combativeness, Destructiveness, Alimentiveness, Acquisitiveness, Secretiveness, and Amativeness located as they are at the base of the brain, are especially excited and maddened to abnormal action by the use of stimulants. Every propensity of man's mental nature, every feeling, the perverted action of which leads to excess and crime, is not only warped and perverted, but temporarily doubled in its activity and power by the use of stimulants. Many thousands of men who, when sober, are self-regulated, just, amiable, and excellent as fathers, friends, and

mans, become quarrelsome, dangerous, and selfish by the maddening influence of ardent spirits.

As the organs of the animal propensities are more intimately related to the body than those of the higher mental powers, the use of stimulants tends to augment the force of those propensities, and by excess of action to drive them directly to abuse and perversion; while the reason, the memory, skill, taste, prudence, ambition, moral and religious sentiments are misdirected, clouded, and benumbed. We have known honest men, who, when under the influence of liquor, would lie and take every dishonorable method to obtain money, in order to carry out their maudlin purposes, but who, when sober, would scorn a lie or a dishonorable act. Who is not seen kind and benevolent men who, when disguised by liquor, seemed callous to every sentiment of kindness? The soundest reason, the sharpest perception, and the clearest memory become clouded by stimulants until the unhappy victim is unable to manage his affairs or reason correctly on any subject. Moreover, every social tie is severed by intemperance—not in every case, but in myriads of cases. The fair and loving wife and her prattling babe, who are the pleasure and pride of the husband and father, become the objects and victims of his hate and murder, when his brain is fired by stimulants. Many such a man has awakened from a drunken condition in a felon's cell, and been horrified when informed that he had slain his wife and child. If this state is but one of insanity it is akin to it, with the crime of intemperance added. The setting on fire of all the passions, and blunting all the higher feelings, dethrones all that is Godlike in man, and makes him more brutish than a beast.

In no instance does intoxicating drink exalt and ennoble the conscience, rectify and guide religious reverence and spiritual or philanthropic sentiments. It does not give delicacy to Ideality, or manly honor to Self-Esteem and Approbation. On the contrary it paralyzes the conscience, perverts Veneration to blasphemous activity, warps Ideality to extravagant caricatures of taste and art, drags wit and music and poetry to a disgusting bacchanalian level; it warps perception, it stultifies reason, undermines or perverts skill; it turns courage into brutal vengeance, love into lust, ambition into boastful strife, and pride and manliness into debasement and dishonor.

Its influence acting chiefly, in a positive way, through the animal and bodily impulses of men,

enthroned the animal nature over the moral and intellectual, and temporarily reduces the civilian to a savage state.

The negative influence of alcoholic drinks on character is to blunt the refining, civilizing, and christianizing tendencies, by benumbing and perverting every moral and aesthetic faculty.

It is sometimes asserted that some men can not make a speech, or any other great and successful mental effort, until they are aroused and stimulated by strong drink. Men may become so accustomed to the use of alcoholic liquors as to require a large amount to rouse them to effort. The same is equally true of those who use opium, morphine, or arsenic. But who thinks the poisoning of a person by arsenic or morphine a proper or desirable mode of whipping the faculties into action? Who does not know that the slave of opium or of arsenic is using up his life-force, and will soon break down his abused constitution and die by poison? Does not the very common yet awful disease called delirium tremens settle the question as to the dire effects upon the mind and body of alcoholic stimulants? Is delirium tremens a more reputable or less terrible death than that produced by the poison of opium or arsenic? Who would not prefer to see a loved friend, if he must die an untimely death, glide into the dreamy elysium of the opium-eater, until consciousness is smothered in the silence of death, than to witness the mental agony of one whose brain, all on fire with alcoholic poison, sees monstrous specters which seem to the victim to bite and devour him? This is insanity intensified—a consciousness a thousand times magnified in its capacity for suffering, having all the pains of the martyr at the stake with none of the martyr's consolations. Dante's "Inferno" pictures no worse tortures than such a brain recognises in rapid review and makes them all its own, until wearied nature releases its unhappy grasp of life, and the terrified spirit is launched upon the unseen and eternal.

THE CAKE QUESTION ON NEW YEAR'S DAY.—There is another and still more important aspect of the cake question, and that is health. Bits of rich cake, eaten instead of the regular meals throughout the day, would give some men the dyspepsia for twelve months; and when to these are added sips of all sorts of wine, they are compelled to intoxication, or a neglect of the social observances, which render the day memorable.—*Demorest.*

Habits of Study.

BY REV. CHARLES K. BRIGHAM.

"MUCH study is a weariness of the flesh," is a famous saying of the wise Preacher of Jerusalem. Lazy boys and men have often found in this a pious excuse for their neglect of learning; shall they be wiser than the Sacred Word? The tendency of our time seems to be in the direction of this maxim. We hear from physicians and from health reformers indignant protests against the quantity of study which the "high-pressure" system of education requires. The old fashion of two sessions of school in a day, with a long evening lesson at home, is giving place to the new fashion of one session, with no evening lessons. Forty years ago the schools of Boston, the Athens of America, had in all the year but three or four weeks of vacation, with three or four chance holidays, and the afternoons of Wednesday and Saturday. Christmas Day and New Year's Day and May Day were unknown as exceptions in the routine of school tasks, and the guns that announced the birthday of Washington disturbed ingenuous youth at their studies. Now the occasion of a special holiday is eagerly seized, and the stated days of school release are as frequent as the Saints' Days in a Catholic land. The universities and colleges find it expedient to shorten their terms of study, without, however, reducing their term-bills in corresponding ratio. There is a school movement for the reduction of hours analogous to the movement for shorter time among the working classes; and we may get back before the end of the century to the old custom of the District Schools at the beginning of the century, and find that three months of study in a year is enough for all the needs of mind and civilization. That too much study is bad for the body, for the muscles, the nerves, and the brain, is now an axiom of medical science and hygienic teaching. To pore over books for sixteen or twelve hours in a day is now only a form of suicide.

The favour which the German "Kindergarten" is finding everywhere is the protest of returning good sense against the confinement of little children to close schoolrooms and stiff desks and dismal rules. In tender years, at any rate, play shall come before study, and play shall be the work. The Kindergarten system may be carried too far, no doubt, and too much may be claimed for it. It certainly

can not be prolonged into the schools of higher grade, or into college classes, with much advantage. The noise and confusion in the classroom of the foreign teachers can not be mistaken for judicious or instructive sport; and when the French class becomes, as it so often does, practically a Kindergarten in the prank of its members, it does not gain in Parisian accent. Study and play can not become identical until animal spirits shall be sublimated into intellect. We must have hours of study as separate from hours of play—ways of study which are other than ways of amusement. Study may be play to some, but it ought not to be to only play to any. On the other hand, no one can afford to trust in amusement alone to give him all his science; in the ball-ground to give him his instruction in physics or in curves and functions; in the theater to give him teaching in rhetoric and art. Study has its proper rules and laws as much as any other kind of toil, and these will continue in force longer than the laws which rule in physical labour. There will be no machine invented that can rescue the brain from working to make the soul wise. By study alone will knowledge come into the soul. Religion may be put on as a garment, but wisdom can not be secured in that external way. Study is the necessary instrument of all spiritual development which to join the wisdom of the past to the experience of the present; and without study human life can not be broad or high or deep, though it may be pure and fresh and earnest.

It is not proved either by school statistics or by health statistics that there is "too much study in the civilized nations; certainly the general intelligence of any people has not reached the point of redundancy in knowledge. The fault is more in the methods and habits of study than in its quantity. Ministers are sometimes called "hard students," and are pitied because they have to spend so much time on their sermons. But not one minister in ten who breaks down prematurely is disabled because he has done too much or worked too hard, but only because he has worked in the wrong way. The amount of study does not do the mischief—it wearies and kills only because it is badly adjusted. Some will study straight on for two, four, six, or eight hours, with no

lie, reading incessantly, writing incessantly, hardly stopping for food. Six or eight hours a day are not excessive in quantity, but six or eight *consecutive* hours are sure self-destruction. Few constitutions can stand that strain, even if all the rest of the waking hours be spent upon the playground, and a solid bar of sleep be put between the days. It is never pleasant to hear a student say that he does all his work at a "single sitting;" that he locks himself in his room after breakfast, and stays there until his late dinner, when his work is done for the day. If the man who does that, month after month, and year after year, escapes organic malady, and keeps his mind whole to old age, it is a clear miracle, a special Providence. Such statements we find in the biographies of great men, but they are usually exaggerated and misleading. Too many consecutive hours of study are just as bad for the strong man as for the schoolboy. One will keep a brighter mind, and more capacious and retentive, too, who breaks away and walks in the garden at the end of each hour, than one who plods on without rest through the long day.

Another habit (much less common than this of studying too steadily), but still fascinating to the ambition of versatility, is the habit of studying *too much at once*. Variety in study is good, but not crowding many things into the place of one thing. Mr. Hartwell Horne, in his essay upon Bulwer, gives a brilliant sketch of that universal genius, dictating a novel to one scribe, a review notice to another, a speech in the House of Commons to another, a love-letter to another, all at the same time, and attending, moreover, to the niceties of his own toilet. Study of that kind is fatal to mental or physical soundness. The hands, no doubt, can be busy in one way, while the brain may be busy in another; and we may not dispute the word of those industrious dames who aver that they listen to lectures more faithfully while they are knitting mittens or darning stockings, or working on canvas elaborate worsted patterns. Yet we may fairly question the healthiness of a habit which shall distract the mind between two objects, and make it act in two or more processes, even if these are homogeneous. There are exceptional chess-players, who can play two or three games at the same time with separate persons, even without looking upon any of the boards. That power, nevertheless, is not a good suggestion for any kind of study. We knew a youth who carried a novel to church with him, and insisted that he heard the sermon all the better, as he read Mrs. Sherwood

or Miss Edgeworth. His justification really was that the preacher had nothing to say, and that the empty word of the pulpit might fit as well on the pages of the novel as the covers which inclosed it. The attempt to study two things at a time is not healthy, as it vexes the brain, tries the attention, and leaves on the mind the effect of cross lights. One thing at a time is a proper and universal maxim of healthy study.

It is questionable, moreover, if the habit, now so common, of *taking notes* at lectures is altogether wholesome. More and more the lecture method is taking the place of the old method of instruction by text-book and recitation. The fifty or five hundred hearers have often their copy-book, in which they set down, as well as phonography or rapid writing will allow, the words which fall from the lecturer's lips. This practice may save for them some future readings; yet, after all, those who listen carefully to the lecturer may really know as much of his idea and his meaning as those who have been busy with pen and paper. Overmuch note-taking makes only a scribe and an amanuensis; and this occupation is by no means quickening to the intellect. The brain of a scrivener is apt to become dry and dull from the mechanical character of his toil, and the piles of well-filled note-books are a poor substitute for an empty brain. Other things being equal, a lecture that is listened to with ear and eye and every sense, while the hands are quiet, except as they applaud at intervals, and is followed by study upon the theme, does more good than a lecture which is transferred in fragments to a hundred note-books. It is an injury to the student, when any mechanical hindrance keeps him from taking in all the soul and life of what he hears. And every lecturer knows that there is far more pleasure and excitement in seeing the bright eyes and attentive look of an audience, than in hearing the rustle of busy pens. It is well enough to note leading points and ideas, to take references, and to record curious facts. But there is a lamentable waste of force and brain in putting upon paper the words of another, and losing in that supplementary work the magnetism of his voice and personal presence. That habit will never make a great scholar or an independent thinker.

Improper hours, too, have much to do with the injurious results which too much study is supposed to bring. Some try to save time by rising at the earliest cock-crow, and getting three or four hours before breakfast. That was the habit of the old Puritan divines, some of whom

certainly lived on, until, like the Boston school-master, they allowed Time's scythe to grow rusty in waiting for them. President Quincy's best work in his study was done in the early morning. Early studies, nevertheless, are not the general rule; and the most of students prefer the boy's reply to his father about the early bird, and have no wish to insult the sun by anticipating his rising in their tasks of knowledge. The average habit rather carries study on into the night than pushes it back beyond the dawn. In spite of the demonstration that late hours are dangerous, there are not a few who find in the witching darkness the best reason for their investigation, and are not ashamed to confess that they study on into the small hours of the night. The midnight lamp burns in rooms where there is a ban upon pleasures of the appetite; and one who eats bran bread and drinks some thin decoction, will write until 2 o'clock in the morning without remorse. This is peculiarly a clerical vice of study. We need not wonder that so much of the pulpit doctrine is dark and mystical when it is elaborated at midnight, or that its teaching is so unnatural. The lawful use of the hours of the night is in sleep, one of the best helpers of the brain in any or all of its offices. To steal these hours for study is just as truly theft and spiritual destruction as to steal them for the frivolities of the ballroom, or the brutal orgies of the bar-room and gambling house. The preacher who sits up until 2 o'clock to write his sermon about the downward way of the profligate, sins as truly as if he were reeling homeward at that hour from some night debauch.

Hardly less mistaken and lamentable is the habit of studying immediately after a hearty dinner. When diet is meagre and monastic it does not matter much that the brain works along with the gastric juice; but when one lives generously, and gives his stomach a good task, he ought, for an hour or two, at least, to let the brain have quiet, and bend his whole soul to the work of digestion. A solid portion of beef and pudding must not be disturbed by any spiritual problems until it is fairly disintegrated, and its weight is dispersed. The practice of working the brain when the stomach is full is only one degree less immoral than gluttony, and is quite as dangerous. All study in this condition is difficult. A sermon written while the assimilation of turkey and oysters, and the other elements of a complete dinner, is going on in the body, can not be expected to speak spiritually or to give satisfactory pictures of heaven.

Posture in study, too, has an important part in its influence upon the flesh. There are those who study in bed, or lying prone, who dictate from the sofa, and affirm that their most inspired thoughts come as they are recumbent: Did not the Psalmist advise to "commune with your own heart upon your bed?" There are fancies and visions, no doubt, which come when the body is prostrate and the feet bear no weight; but for clear, intelligent perception, for logical reasoning, for the thought which is to ennoble man, the brain ought to be in its proper place for life by day, lifted above the body—not on a level with the heel. A fastidious poet, like Gray, may find his heaven in reading French novels on a sofa; but no man in that position can acquire or impart much that will make the world wiser or show men the way to heaven. The awkwardness of reading in bed is enough to condemn the habit, even without its risk to the brain, which can not fulfil its function in that attitude. A minister who dictates his sermons as he is lying down, ought in consistency to turn his pulpit into a couch, and preach in that posture. He would probably give the beloved sleep.

Others study in a stooping posture, bending over a desk or a centro table. We shall have more to say of this in another essay on school-houses and their furniture. But the "family study," as a group of round-shouldered boys and girls are huddled round a table lighted by one shaded lamp in the middle, is to a wise looker-on any thing but a cheering sight. The poetry of that quiet household gathering is disturbed by a sense of the wrong which these industrious scholars are bringing upon their frames. The "stoop of the student" is proverbial, and is expected as an almost invariable sign. But it is not really necessary that a student should stoop any more than a soldier or a peasant woman of Egypt. In nine cases out of ten it is a careless habit, which might have been avoided in the beginning, and can be changed, too, unless the back have become fatally and rigidly crooked. In the Jewish ritual law a crooked back was the mark of disgrace; and the instructed Scribe could not present his offering at the altar, if he came with that deformity. The Christian ritual would not be far amiss in reenacting that Hebrew statute. The bowing posture may be a fit attitude of prayer, but it is not the fit attitude of study. Study is inspiration to the soul, and ought not to take the posture of humiliation.

In the former years there was another bad habit of study, which happily the substitution

of gas and kerosene for oil has much diminished—a habit of reading with a dim candle, or oil lamp with a single wick, between the eyes and the book. It is impossible to estimate the number of eyes that have been ruined, and of brains that have been overtasked, by that preposterous method of economising light. That some great men have gathered their knowledge in that fashion does not make it respectable now.

Not many absolute rules in regard to study can be given which shall suit all constitutions and all kinds of study. But there are some general advices that all will do well to heed.

1. In the first place, it may be confidently stated that *no study of any kind ought to be attempted when the body is fatigued and needs rest.* It is a great mistake for a tired man to give himself to a new occupation, which will only add fatigue of the brain to fatigue of the limbs. Study can not be profitably pursued, when the nerves are racked by lame joints or stiffened muscles. Study after moderate exercise is good, but not after prolonged exercise. One who has been out all day with gun and dogs, tramping twenty or thirty miles over meadow and moor, or one who has rowed in a boat-race half-a-dozen times up and down the river, or one who has sawed a cord of wood, is in no condition to spend three hours on mathematical problems or on Hebrew roots. The Home Journal, or Josh Billings's talk about "Milk," is as much as the brain ought to undertake in this condition of the limbs. Study nothing, not even your own constitution, when you are tired and want to go to bed. Postpone the reading of THE HERALD OF HEALTH until the next morning, and eschew all metaphysics. This is a rule which has almost no exception. Of course, there should be no more study when the brain itself is tired. The moment any one feels that his brain is becoming dizzy, that he thinks or writes by a painful effort, that he must wrap a wet towel around his head, he is guilty if he goes on with his writing or reading. Fatigue is the inexorable limit of all profitable study. And where there is uncertainty as to whether or not one is too tired to go on, the fatigue should have the benefit of the doubt. Even the fatigue which "bores" cause may destroy for the day all aptness for study. One who has entertained all the morning a persistent specimen of this tormenting class, had better spend his afternoon in the Central Park than in his library.

2. Then, in the second place, we may say that a wise student will be *regular* in his habits. He

will have certain hours in the day when, *as a rule*, he will be with his books and papers; and he will not often take other hours, even if he may lose some of his regular hours. On the railways, a late train "makes up time;" but in study it is not well to try to make up lost time. One who has lost his morning task by some interruption, will err if he sits up at night to make the loss good. No amiable student will be unbending in the arrangement of his hours, barring the door rigidly between 9 and 1 A. M., or between 2 and 5 P. M., to all visitors. If the country cousin whom he has not seen in a twelvemonth comes to try his hospitality, he will sacrifice a portion of his dear study hours. A sick child will certainly derange them. But, except for such emergencies, the order of study hours should be kept, if good work is to come out of the study. Six hours of regular study in the daylight will accomplish more than ten hours of irregular study, and will leave body and mind at the year's end in far better condition.

3. A third rule of health in study is to *vary it, to have it in more than one kind.* "One thing at a time," as we have already said, is better; but *not one thing all the time.* If one studies six hours in the day, he will do well to divide his hours between two or three branches; not to spend them all on chemistry alone, or the calculus alone, or the works of Herbert Spencer. There are some college students who complain that they can not take all course required and do good work in any branch; yet the best students in college are almost always those who take all that the rules will allow, and add besides a large miscellaneous reading. Great harm is done to the minds of students by stimulating the passion for special studies. A specialist, who works always and only in one department, is apt to get a dry brain, and to decay before his time. Study as many things as you can study well, and body and soul will profit by the variety. It is quite possible to study four or five modern languages in the four years of a college course, without any neglect of the ancient languages—provided that those modern languages are taught, as they ought to be, in any university worthy of the name.

4. Another rule of healthy study is *quiet.* New York editors are compelled to work in incessant noise, if they would have their copy ready for the printer's devil, and after a time the noise ceases to trouble them. But an ordinary scribe would as soon choose pandemonium for his study as an office on Nassau Street or Broadway. The sensitiveness of the ear is

wounded by studying in the midst of noises of any kind, whether of carts rattling in the streets, or hammers pounding on boilers, or the screeching of viols, or the strumming of pianos, or the crying of sick and fractious children. A reason why so many prefer night studies is that most of the sounds of the day are stilled in the hours of darkness. Perfect quiet is not necessary. The ticking of the clock, the gentle murmur of wind in the trees, delicate and soft sounds, rather stimulate thought and imagination. But the habit of writing and reading in the roar and rattle of harsh sounds, or even in the swell of musical harmonies, is fearfully destructive to nervous integrity. The proper room for hard study is not the nursery, or the office frequented by all sorts of visitors, but the quietest retreat of the house—always remembering that this shall be spacious, light, and airy. We have already protested against the *sanctum* as a fit place for literary labour.

5. And this last reservation suggests another rule, to have plenty of physical light in any kind of study which is done above ground. The photographer must have a dark room to bring out the picture on his plate; but his study should be in the light, as his art is ruled by light. Not for the eyes only, but for the mind as well, is light necessary in studies. Knowledge comes into the soul from the printed page much more fully and cheerfully when the page is bright with radiance. The science that thrives best in darkness is mystical, occult, and devilish. "Study in the light" is a maxim as good as "walk in the light." Even a blind student finds more satisfaction in his studies by day than by night, and is quickened in his intellect by actinic influence.

6. Another rule repeats what we have said of posture in study. Sit upright, or stand upright, and do not study with the head reclining, either forward or backward. Sit straight at the writing-table or in the study-chair. The Roman practice of reclining at meals, and studying with head erect, was more philosophical than the American way of sitting bolt upright at table, but stooping to the desk.

7. And still another rule is in place. Do not get into mechanical ways of study, or follow any kind of study which is not interesting, merely as a matter of duty. For sanitary reasons, if for nothing else, routine studies should be discouraged. Mere memorizing, mere conscientious reading of even the best books, is bad. All study in which the heart is not engaged with the head injures the head and injures the

body. A conscientious law or divinity student may grind out a certain amount of work, like a dog at his churn, but will ruin himself in that uncongenial business. Perhaps this rule of study should have been put first in our list.

IT MUST BE TRUE.—A very old man came to King Agis of Sparta to lament over the degeneracy of the times. The king replied, "What you say must be true, for I remember that, when I was a boy, I heard my father say that when he was a boy he heard my grandfather say the same thing."

It is a sufficient answer to most of the croakers, that doubtless the same things have been said in every generation since the beginning of recorded time. Till within twenty years, for instance, it has been the accepted theory that civilized society lost in vigor what it gained in refinement. This is now generally admitted to be a delusion growing out of the fact that civilization keeps alive many who would have died under barbarism. These feeble persons enter into the average and keep down the apparent health of the community; but it is the triumph of civilization that they exist at all. I am inclined to think that when we come to compare the nineteenth century with the seventeenth, as regards the health of women and the size of families, we shall find much the same result.—T. W. H.

THE TIMES OF STUDY.—It is a fact well known to the physiologist, that the attention of the human mind can only be given with success to a particular subject for a limited time. The younger the brain is, the less the time during which knowledge can be taken in or retained. In opposition to these obvious facts, children are kept at their studies or in school for much longer periods than they can successfully learn. The consequence is that they remain in the close schoolroom while they ought to have been in the yard at play. This system is doubly wasteful, for both health and learning are sacrificed. The whole system of hours of study, and of play or of work, requires to be revised in our primary schools. The importance of playgrounds in the open air can hardly be overrated. It is only the practical physiologist who can appreciate the real value of muscular exercise, and the influence of fresh air from time to time during the day, to enable children to pursue their studies with success.—E. L.

Crumbs from the British Scientific Association.

BY DR. LYDIA F. FOWLER.

IT was my good fortune to be lecturing in Liverpool during the last meeting of the British Association, held there in September, and I gathered a few crumbs that I thought would interest some of the readers of THE HERALD OF HEALTH.

There were seven different sections—one devoted to Mathematics and Physical Science; one to Chemistry; one to Geology; one to Biology, including Anatomy, Physiology, and Anthropology; one to Geography; one to Economical Science and Statistics; and one to Mechanical Science. Each of these sections had its President or Head Center, and held its meetings daily. As all the sections met at the same hour in different buildings, an individual could not attend them all, unless he were invested with omnipresent attributes; hence there was a fluctuating audience at each, and for a week the streets of Liverpool, in the neighborhood of St. George's Hall, Concert Hall, Town Hall, etc., were teeming with the savans of the present day coming and going perpetually, as those who had taken a ticket seemed to be impressed with the idea that they must get the worth of it by attending as many of the meetings as possible, even though they remained only fifteen minutes at a meeting. If it be true that there is an ethereal atmosphere or sea surrounding us, in which every thought is a wave constantly ebbing and flowing like the tide on the sea shore, how could one help becoming imbued with science of all kinds, even though there were no natural predilections for research, by constantly coming in contact with hundreds of these wise-looking, heavy-browed, spectacled savans, that invaded Liverpool like a swarm of locusts, and filled the whole atmosphere with a scientific aura that for the time seemed to permeate our very being.

It is considered to be the highest honor to be chosen President of the Association. This year the choice fell on Prof. Huxley, which plainly indicates that even science is progressive, for in many ways Prof. Huxley has made innovations in the stereotyped ideas of the past. It proved a very happy choice; for Prof. Huxley has not only his own pet theories, but his mind seems to be an *omnium gatherum*, and he is at home in all departments of science. Without having so

much Causality as to make him originate theories, he has a fine analytical brain; the faculties in central part of the forehead, Individuality, Eventuality, and particularly Comparison, are very large, so he is well adapted to take the theories of all who have lived before him, test their respective merits, and deduce practical conclusions from them. This was very evident in his opening address, when he gave a very interesting synopsis of the "Germ Theory." This shall be my *first crumb*, and I send it with the hope that some of our American young doctors will make investigations on this subject, which is now agitating the scientific world this side of the great ocean; and though there have been many experiments, and many investigations by learned men, yet in these days of improvement, when the microscope may be considered to be only in its infancy, however marvellous its declarations are to us, there is yet very much to be discovered.

The Germ Theory, as Prof. Huxley believes it, is comprehended in a single sentence, that "living matter sprang from preëxisting matter." The old philosophers affirmed, 1800 years ago, that "life proceeds from no life." This was the universal doctrine accepted all throughout Europe to the seventeenth century. In 1668, an Italian, Redi, "a poet, a scholar, a physician, and naturalist," one who was contemporary with Harvey, dared to differ with the ancients, and made many experiments, till he raised a banner and on it wrote, "No life without antecedent life." Hence there were two general theories—"Biogenesis," the one Redi advocated, and "Abiogenesis," the opposite. Needham and Buffon advocated the latter. Needham boiled infusions, had them carefully corked and heated to kill the existing germs, and yet he declared, after due time, animalcules arose in the infusion. He supposed that "each individual living organism is formed by the temporary combination of organic molecules." Abbe Spallanzani criticized this conclusion of Needham's, and declared that "all the air could not have been excluded, or else the vessels which contained the infusions were not hermetically sealed by fusing their necks, and if they had been boiled at a temperature of boiling water for three-quarters of an hour, no

animalcules would make their appearance." Then, said Huxley, oxygen was discovered, and it was affirmed that the presence of free oxygen was one of the necessary conditions of the existence of life, and of the changes known as fermentation and putrefaction. Then arose another scientific contest. Schulze and Schwaren, Cogniard de la Tour, Berzelius, Schroeder, Durch, and Helmholtz, made their experiments, by excluding oxygen, and with passing air through a sieve of cotton-wool. Prof. Tyndall demonstrated that the ordinary air is a sort of stirabout of excessively minute solid particles, that these are almost always destroyed by heat, and that they are strained off and the air is purified by being passed through cotton-wool. The solid particles, however, are thought by Huxley to contain germs of life. Pasteur made careful experiments, and strained the air through cotton-wool, and found that there was nothing competent to give life in the fluids submitted to heat. He submitted to a microscopic examination the cotton-wool that had served as a strainer, and he found sundry bodies recognized as germs among the solid particles that had been strained off. He proved that these germs were competent to give rise to living forms by a solution fitted to their development. He also found that if the neck of the tube was drawn out and bent downward, and the fluid was boiled and tube sufficiently heated to destroy the germs, if the air was allowed to reach the tube the germs could not *fall up*, and there would be no consequent life; but if the neck of the tube was broken so that the air should fall down *upon it*, in a few days the solution was full of life produced by the living germs in the air. When these principles are fully understood, Prof. Huxley thought that the nature of epidemic and epizootic diseases will be also understood, and then they will be checked and eradicated.

Crumb No. 2.—Prof. Huxley's opening address seemed to carry so much *prima facie* evidence with it, that one might have concluded that every one was willing to admit his theory of *Biogenesis*; but in the section of Biology, Dr. Bastian brought forth a paper on his experiments that proved to his mind the truth of the theory of *Spontaneous Generation*. He visited the manufactory of a gentleman in London who prepares meats in tinned cans. He observed that they were subjected to a heat of about two hundred and thirty-three degrees Fahrenheit, and kept at that heat for more than half an hour, and then subjected to a much higher

temperature for two hours. He took three tins—one of salmon, one of lobster, and the other of Julienne soup. He subjected these to microscopic examination. The salmon was not quite fresh, but the other two were. He saw by means of the microscope that in portions of each of the three different articles a number of minute living things, which he called *living infusions*, capable of coming into origin *de novo*. These had a bacteria-like body, with projecting filaments. In the salmon there were the absolute filaments of a fungus. The query was whether these preëxisted when the meat was fresh, and if not, whence came they? There were two alternatives—either that germs could stand a greater heat than has been supposed, or that the molecules of dead matter are able to re-arrange themselves into living bodies, exactly such as can be demonstrated to be produced in another way. Dr. Bastian affirmed his belief in the latter hypothesis. As a proof he adduced the following as experiments he had tried. He took solutions and exposed them to a high temperature, after the vessels had been hermetically sealed to one hundred and fifty-three Centigrade for several hours, and then allowed them to cool. In three weeks a cloud-like flocculi appeared, and on one of these a minute white speck, which increased in size. Prof. Sharpey, a friend of his, opened the flask sixty-five days after it had been sealed, and there was a whitish material one-tenth of an inch in size, and the whole mass was fungus with filaments and spores of fungus. These experiments made him doubt the truth of Pasteur's theory of putrefaction and the germ theory of disease. After some discussion, *pro* and *con*, the President of the section, Prof. Rallston, said he hoped they would continue their investigations, and that at some future time he trusted that Dr. Bastian would, if he found he had made any mistake as to the manner in which his flasks were sealed, or if he gained any new light which would make him feel that his position was untenable, be the first to refute his own theory; that while the account of his experiments had been very interesting, yet he thought the fact that there were the same forms of life after a long series of years that had existed in the original strata, was one of the best arguments against spontaneous generation, for, had this been possible, we should constantly have new developments of life.

"What shall be done when doctors disagree?" asked some one a long time ago. The only reply we can make is that all should investigate, experiment, and observe patiently the

results. The only difficulty in investigation is that each experimenter has often prejudged according to his preconceived prejudices, and finds it impossible to see truth only through his own biased glasses.

Crumb No. 3.—In the section of Chemistry, Mr. Gordon read a very interesting paper, "How to Prevent Lead Poisoning in Water and Other Liquids." If some could stereotype this article, and fasten it into the minds of those who make lead pipes in such a way that they would never be able to make them again, many lives could be spared. The pith of his article was as follows: That on account of the ductility of lead, and because it could be obtained cheaply, it was used extensively for cisterns and pipes for the transmission of water and other liquids. That it had been proved that when water remains in leaden pipes it accumulates poison. The query has arisen, What can be substituted for the lead? Iron has been proposed; but iron is liable to rust, is difficult to repair, is liable to break at the joints. Galvanized iron has a diminished tenacity, and is liable to split and to corrode. So iron will not do. Copper should not be used for any dietetic purposes, therefore copper will not do. Stone can not be used for practical purposes. Pottery is liable to fracture. Gutta serena is wanting in durability. Tin is too expensive and wanting in pliability. A pipe that shall combine purity, wholesomeness, strength, cheapness, and ductility, can be made by encasing a block-tin pipe in lead. These metals combined will give the ductibility and pliability of the lead, and the innocuous features, as well as the superior tenacity of the tin, while the lead casing will be a protection to the tin pipe. An ingot of tin nicely inclosed in an ingot of lead, formed simultaneously by hydraulic power—the superior tenacity of the tin admitting a diminution of thickness and weight in the pipe, allows the pipe to be made **EQUALLY CHEAP** with the lead pipe. This last argument may prevail with those who neither think nor care for the preservation of the health and lives of the people. Suffice it to say, that this new kind of pipe has been introduced in a number of towns of England and in Calcutta, in which lead-poisoning was one of the most active causes of disease, according to statistics.

Crumb No. 4.—In the busy thoroughfares of large cities dust has always been considered a nuisance, injuring the goods in the shops, and yet it accumulates nearly as fast as it is removed.

If the germ theory of disease is the correct one, dust, by rising, is often the cause of carrying contamination to a whole neighborhood. Mr. Cooper read a very interesting paper on "The Use of Solutions of Soluble Chlorides for Laying Dust in Thoroughfares," and he gave the following important statistics, worthy the attention of the "City Fathers" in all large cities. In Liverpool, in 1869, Bold Street, Church Street, and Lord Street (three streets containing the finest dry goods shops or stores in Liverpool), were watered with this solution of salts with good effect. The Westminster Board of Works had also tried it on a limited scale, but determined to use it over their whole district, an area of 250,000 square yards, and they were pleased with the result, both in the saving of labor and of water. They found that by using one ton and a half of the chlorides per day, which cost £3 15s., the labor of ten cart-horses and ten men, costing £4 10s., can be dispensed with, saving 15s. per day. Then an additional saving of 350 loads of water, of 250 gallons each, at 10d. for 1000 gallons, would be £3 12s. 11d., which, added to the 15s., would amount to £4 7s. 11d., and this would be the gain after paying for the salts. Then as a disinfectant, if the *Deliquescent Chloride of Aluminium* (one of the best antiseptics, free from odor, not poisonous, will arrest decomposition when it has commenced, and prevent its commencing if used in season) be added to the salts, and the streets were watered with the solution, especially in times of pestilence, this new disinfectant would not only cost one-third of the price of carbolic acid, but it would purify the air, destroy parasites and germs, and absorb all noxious vapors, as well as free the streets from dust.

Crumb No. 5.—One of the most interesting and important papers was read by Dr. Moffatt, on "The Influence of the Soil to Produce Endemic Diseases." This is a subject on which we have thought for many years, and have made many practical observations in our travels through the country, and on this account it was a pleasure to have our own observations corroborated by the Doctor, who affirmed that "the soil has an influence on cereal plants grown on it, and on the diseases to which the inhabitants are subject." He said that where he practised medicine, in some districts the soil was *carboniferous*; in other districts it was the new red sandstone, or Cheshire sandstone. The people who lived in the first district were mostly engaged in mining and agricultural pursuits, while those in the latter region were mostly

agricultural in their tendencies. The people who lived in the carboniferous region were troubled with goiter and anemia, and that these diseases were entirely unknown among the people who lived on the new red sandstone. The people of the latter were troubled with consumption. He had found one cause of anemia to be a deficiency of the oxide of iron in the blood of the patient. He had examined the wheat grown on the soil of the Cheshire sandstone, that on the carboniferous limestone, that on the millstone grit, and he found that the wheat that grew on the Cheshire sandstone contained the largest quantity of ash, the largest quantity of phosphoric acid, the largest quantity of oxide of iron; that each inhabitant of the Cheshire sandstone region, who eats a pound of wheat per day, would in this way take five grains of the sesqui oxide of iron more than the inhabitant of the carboniferous district, who suffers from the want of it, and hence has anemia. Then, again, the sheep that are wandering about in the carboniferous region have a deficiency in the phosphates and in iron; so they are troubled with anemia, and the people, hence, are doubly subject to disease—by the wheat they eat, and by the mutton they eat, as well as by the general influence of the soil. Such was the pith of his observations. It may be that the time will come when medical students will be taught how to prevent diseases among the people. It may be that even consumption's ravages can be stayed; but it will be readily perceived how futile it is for the consumptive patient, when ordered to change his residence as a curative *dernier resort* to go to a region where the soil contains the elements calculated to produce consumption. The same is true of other diseases. The young man about to settle in life will not only think of going to a spot where he can make money, but he will select one in a region which will be best adapted to his own organization in a chemical and physiological point of view.

Crumb No. 6.—Mr. Hope read an interesting paper on "The Antiseptic Treatment of Rinderpest and Scarlet Fever." He gave his experience in successfully treating and curing over one hundred cows by the use of lime and carbolic acid. But he used these remedies in earnest, and effectually killed or stamped out the disease in every one. His ideas on the treatment of scarlet fever are worthy of notice; for this disease is one of the greatest scourges that can attack children. Prof. Huxley affirmed in his opening address that the statistics of three

years among the diseases of children, gave the astounding facts that ninety thousand children had died of scarlet fever in the three years. The doctors all over the land would confer with each other on the nature and best treatment of the disease, many lives might be spared every year. It certainly would do no harm for them to try the chemical or antiseptic method by the use of carbolic acid.

Mr. Hope, in his paper, made the following astounding declaration (which must have startled the prejudices of some of the doctors present): "A purely medical treatment, properly so called, of infectious disease, always has appeared to me, if I may be pardoned for the expression of so heretical an opinion in such orthodox company, to be empirical in the last degree." Mr. Hope found, after an absence from home, on his return, his child ill with the scarlet fever. He had dreaded this disease more than any other. He knew that the most active measures were requisite, and that immediately. He isolated the child, and then commenced to kill the scarlet fever germs, especially those in the throat, that caused much pain in swallowing. For this purpose he used a gargle of one part of carbolic acid to two hundred parts of water. This had an instantaneous effect of the most cheering kind. He put cloths wrung out of the same proportion of carbolic acid and water on the bed, over the bed, and about the room, and had a basin of water with the mixture in it near the door for them to wash their hands in it whenever they went out of the room. In a few days the child recovered, and during the process of "desquamation" he bathed the child's body with the same mixture. Before the child recovered sufficiently to prevent others from catching the disease, some of the family came in contact with it, by going into the sick room, and carried it to another child in the family. This, however, was taken in season and soon cured, and the house was cleared of the dire disease. There was considerable discussion, after the paper was read, about the chemical, therapeutic and antiseptic treatment of disease by inorganic remedies. Dr. Bayles, the medical officer of health for Birkenhead, affirmed that he had used carbolic acid as a disinfectant for a number of years with great success, and he thought Mr. Hope's experiment with the rinderpest, a zymotic disease, very valuable, and it was also quite as valuable with regard to scarlet fever, but then they "all knew that children recovered from scarlet fever in an extraordinary and unaccountable way. Perhaps no treatment was better for this disease than cleanliness, fresh

ur and water!" He continued to discuss the point that he "did not wish the audience to believe that the action of medicine was not well understood by the faculty; for while some medicines were empirical, other kinds had been well tested and were understood. He could always arrest the progress of fever in any ward by the free use of carbolic acid." He requested those who were interested to make experiments with it and other disinfectants in the treatment of disease, and present the result of their experiments at the next meeting.

When we think of ninety thousand children that died in three years of this disease of scarlet fever, and that perhaps their lives might have been saved if these progressive ideas concerning the treatment of the disease by carbolic acid, or by cleanliness, fresh air, and an abundance of water, had been disseminated widely among the people, we shall begin to realize the importance of scattering them far and wide on the four winds of heaven—that the statistics of the next three years may show a great diminution of deaths by this disease among the children, and to think that perhaps it may be finally stamped out of existence, and be remembered as a thing of the past.

Crumb No. 7.—A paper was read on "The Utilization of Fibrous Cotton Seed." It was stated that more than a million and a half tons of the seed were wasted yearly, and that these could be utilized and much profit derived from the saving of the seed; that these wasted seeds, if saved, would produce 250,000 tons of pure cotton, 500,000 tons of cattle cake, and 250,000 tons of oil. The value of these different materials would be £20,000,000 sterling, while the husks of the seeds could be made into paper, and thus produce an unfailing supply of paper at a cheap price. If this be correct, how important the suggestion may be to our future paper manufacturers and to the people at large!

Crumb No. 8.—In the Geographical Section were many interesting papers. Lord Milton gave a synopsis of his trip across the American Continent. Col. Gilpin gave an account of his discovery of Colorado, and his experience in Mexico before any Anglo-Saxon had been there. Sir John Swinburne read a paper on "The South African Gold Fields," which had been supposed by some to be "the land of Ophir" spoken of by Solomon. He said a ton of the quartz yielded two or three ounces of gold. Hepworth Dixon read a paper on "The Holy Islands of the White Sea." Sir Koderick

Murchison alluded to Livingstone, and said he hoped the traveler was still living, though they had not heard from him for many long months. But the most interesting Crumb, in many respects, in the the Geographical Section, was given by Rev. Robert Moffatt, the old missionary, who has lived fifty-three years in Africa. He remarked that he had often passed over the diamond regions; and that before he went to South Africa the chiefs were so barbarous and the natives so treacherous that no white man dared to go among them; but after he had prepared the way the dangers gradually diminished, because the natives had become accustomed to seeing a white man, and since then thousands of wagons loaded with ivory had come from the interior, while at the present time at the diamond mines there were many thousand Englishmen, and many from other civilized nations, who would not only explore the region, but would remain there and build up towns and settlements, and there was every reason to believe that benighted Africa would ere long become civilized, and Ethiopia stretch forth her hands unto God.

It may seem to us at times as if a highly cultured man sacrificed too much to spend his entire life among barbarous tribes who never appreciate his talents, and who are never willing to resign their idolatry for his ideas of Christianity. Yet it may be ourselves at fault in prescribing what shall be the result of his efforts. These may not be visible even during his lifetime, and yet one man may have power, like a Columbus, to open wide the gates of a continent to thousands of his own race, who settle and develop its resources.

Crumb No. 9.—A suggestion was made that ocean telegraphy could be brought within the means of the common people, by having *hemp* cable instead of *iron*, the hemp being the cheapest; and the objection was removed that it would decay, by the fact that the salt in the water would preserve the hemp.

There were many interesting papers on the different Caves that had been explored; on the Reef-coral found in limestone rocks; on the Portuguese Anchor Sponge, that has many long filaments that hold it in its place; on Left-handedness; on the Scientific Uses of the Imagination, that Prof. Tyndall thought was very necessary to receive (in good faith) all the varied scientific theories afloat at the present time; also on the North American Indians, with reference to their attention being given to agriculture. Some one proposed that the idea

of the intermarriage of the Indians with the Whites was one calculated to advance the Indians in civilization. He did not say what he thought would be the consequence to the Whites who should accede to his proposition.

Crumb No. 10.—Sir John Lubbock gave a very interesting address to the workmen on "Savages." He affirmed as his opinion that the different nations had sprung from the savage tribes, and had gradually improved, rather than that the present races of savages had deteriorated from civilized life; that many of the customs of the present day are only the relics of those of the same races when they were in a savage state. This was true with marriage and with religious customs. There were the same innate feelings, instincts, and passions in the early ages as now; but as civilization progressed man was governed more by his higher moral nature. Woman had a more elevated position, and the religionist, instead of being satisfied with Fetichism, the worship of material objects, Sabianism, the worship of the heavenly bodies, or Heroism, the deification of men after death, was now based on worship of the Deity, and that the more science was understood, the better would man's condition be in every respect.

I have thus hinted at some of the most inter-

esting features of this Scientific Association. I professed to have the interests of humanity at heart, and to desire to carry the beneficent principles of science to every man's door.

"I will magnify my calling," was one of the most prominent characteristics of the principal speakers, especially those who had prepared papers; as each had looked at his own subject through the glasses that he was accustomed to wear, till the face of nature was red, green, or brown, as the glasses through which the things looked were so colored.

Each ventilated his own theory, and many important suggestions were thrown out that the outside world will heed, and will make the nuclei of inventions, and thus the world will progress to perfection. The discussions have a tendency to break up the old, stereotyped ideas that have become moss-grown, and many innovations have thereby crept in, which make us feel that "the world does move," and that progress is the order of the day, and that eventually the great questions to be solved will not be so much the geological age of the earth, or the spectrum analysis of the sun and the planets as they will be how to prevent crime, misery, sickness, and pauperism; also how to make each home a paradise, which shall be in some degree a foretaste of the heavenly home to which we are all hastening.

The Physiology of Man.*

BY M. L. EDGEWORTH, M. D.

UNDER this rather ambitious title, Dr. Flint produces the third volume of a work less rudimental than most college textbooks, and not got up merely for the market, to cram students for the solemn farce of graduation. More a chemist and experimental manipulator than a writer, Dr. Flint lacks discipline of style; he is often diffuse, inexact, and tautologic, and might, with advantage to his readers and himself, condense the whole pith and substance of five volumes—two of which we learn are still in manuscript—into one clear, vigorous, and salable volume. A teacher should

avoid hiding his candle of thought under a bushel of phrases.

Our limits oblige us to confine our review to the author's own researches on the functions of the liver in the present volume.

We need but allude to the history of bile, its secretion both from portal-vein blood and arterial blood, its service in the digestion of fats and in stimulating peristaltic movement of the bowels, the absorption of its acids with the chyle, and their disappearance in the act of respiration. The residual biliary excretion affords the theme of Dr. Flint's investigations on cholesterine and stercorine, published at length in *The American Journal of Medical Science*, Philadelphia, 1862; vol. xlv., p. 305.

Cholesterine was known to exist in the liver, in the spleen, in the crystalline lens, in the

* *The Physiology of Man*; designed to Represent the Existing State of Physiological Science, as applied to the Functions of the Human Body. By Austin Flint, Jr., M. D. New York: D. Appleton & Co. 1870.

brain, spine, nerves, and blood—but most in the nervous system. Is it carried to the brain by the arterial blood, or is it formed in the brain and nerves? This problem is met by analyzing the blood from the two systems of vessels going out and coming from the brain. The carotid artery revealed no cholesterine to the microscope three days after drawing blood, and only a few crystals after the eleventh day. In quantitative analysis, the proportions, although clear and decisive in their theoretic bearing, require implicit confidence in the skill and accuracy of the chemist to sustain our faith in conclusions based upon thousandths parts of a grain. Dr. Flint does not ignore the necessity of confirming the results observed by a number of independent operators.

Uncomplicated by the use of ether, the experiment upon a dog showed of cholesterine in the jugular-vein blood forty-six one-thousandths of a grain, and this, as compared with carotid-artery blood, was as 1.546 to .967 of a part per thousand.

As an instance of the loose way in which Dr. Flint strings his paragraphs together, let him take page 282, last paragraph, where he comments on Experiment IV., made on the nervous and arterial bloods of *one* dog, as follows: "Experiment IV. shows but a slight difference in the quantity of cholesterine in the arterial blood in the two animals; the proportion in the animal that was etherized being 0.774 per 1000, and in the animal that was not etherized 0.769 per 1000," etc. The simple reader, following the grammatical text, asks himself, Of what *two* animals?—since only one was mentioned in Experiment IV., on the same page. To get at the author's real meaning, he must go back a page and a half, to Experiment II., in which a dog was etherized. The comparison intended is between Experiment II. and Experiment IV. Of course, no one whose mind is grappling earnestly with the facts in question can fail to see this, on due reflection, but the inaccuracy of language in the statement is vexatious; it involuntarily suggests distrust of the exactness and lucidity of mind in the writer, who is, however, probably conscientious in the work which he writes about so carelessly. He has not brought his conscience to bear upon his style. But his fortune is made—the misfortune is his reader's.

Cholesterine, discovered by P. de la Salle in 1782, was extracted and described by Chevreul in 1814, and was demonstrated in the blood by Denis in 1830. It is an animal resin, of the composition $C_{25}H_{42}O$. The bile acids hold

it in solution; it is concrete in gall-stones, and in certain cysts and tumors, and is united by organic molecular combinations with the other elements of nerve tissues and of the crystalline lens. Its so-called crystalline structure is simply lamellar, in thin, transparent rhombs or rectangles with distinct borders, and fracture in parallel lines. The microscope detects it in tumors and intestinal concretions. Inodorous, inflammable, and neutral, it does not saponify; it reddens with sulphuric acid, and is soluble in ether or hot alcohol. To appreciate its quantitative relations, let us accept the estimate of bile $2\frac{1}{2}$ lbs. to 140 lbs. man in 24 hours.

Of this bile, in health, cholesterine may form 0.618 to 2.66 parts in 1000. Dr. Flint's experiments have been directed with a view to prove the importance of the depuration effected by the liver on the blood in eliminating the cholesterine resulting from the waste of nerve tissue. Analysing the blood returned by paralyzed limbs, in three subjects, he finds no cholesterine. No nerve waste by action here, no cholesterine eliminated; the reasoning is sound; but, considering the number of years that Dr. Flint has been at work upon this matter, and the daily opportunities his hospital as well as private practice has afforded of verifying his theory by analytic facts, we are surprised to find only three cases cited. In the small quantities of blood experimented on, moreover, the largest amount of cholesterine found, even on the sound side of the body, was only sixty-two one-thousandths of a grain, so that the skeptic may ask, Is it certain that so little might not escape eyes and scales whose preconceived judgment its presence would reverse? Far from us be such skepticism, but we would desire experiments upon a larger scale. If the accumulation of cholesterine in the blood be so pernicious as Dr. Flint suspects, it will naturally be responsible for much of the damage to health, when cirrhosis from the habitual use of ardent spirits, or from other causes, has thickened the connective tissue of the liver at the expense of its cells. Their operations on the blood being thus in great measure prevented, analysis ought to detect in this blood larger proportions of cholesterine. In fact, Dr. Flint found in one case of cirrhosis, with jaundice, 1.850 parts per thousand, which is more than double what he had ever found in health. Two other subsequent cases of well marked cirrhosis, however, failed to confirm this theoretic view. There might have been little nerve waste to charge the blood with cholesterine in one case, as the patient was confined to bed; but the other one,

who, although dropsical, had pretty good general health, showed much less than the average proportion of cholesterine in his blood. Dr. Flint neither states nor resolves the question whether it passed into the serous exudation, yet he concludes, rather to our surprise, that these cases, taken in connection with three others of paralysis, and with his other experiments, *fully confirm* his views with regard to the excretory function of the liver. We raise no issue on the principle, but the facts cited in support of it are, it must be confessed, rather weak in the knees.

GLYCOGENY.

Our readers, all more or less physiologists are of course aware that they carry about in their livers each a small sugar factory, and are duly grateful to Prof. Claude Bernard for this sweet assurance. If any have been shaken in the faith by counterblasts from Messrs. Figuier, Sardou, Pavy, McDonnell, or other scientists, they may be consoled and reassured by the experiments of Dr. Flint. He has repeated Bernard's experiments, proving the presence of this liver-sugar in the hepatic-vein blood, caught in the living animal before its oxidation in the lungs; he claims to have done this many times, both in public and private, which is doubtless meritorious work in a certain point of view, but the sentiment of the numerous, unfortunate, and perhaps estimable dogs, who had a vital interest in these repetitions, is not taken into consideration. If we venture to allude to this, it is not to raise a question as to the devotion of the dogs to the service of science and humanity, but to ask the necessity of this mediation, after Figuier, Lehmann, Frerichs, Poggiale, Leconte, and many other physiologists of the first value, had already confirmed the fact of sugar in hepatic-vein blood; while, as Dr. Flint remarks, Pavy and McDonnell had never denied it.

Still, with the amiable "view of harmonizing, if possible, the discordant observations of Bernard and Pavy, we have ourselves made a number of experiments," says Dr. Flint, and another army of canine martyrs have equally verified, in his expert hands, the accuracy of Dr. Pavy's experiments, at first blush contradictory to Bernard's glycogenic inferences.

Dr. Flint boasts of having arrived at such facility, by dint of practice, as to have cut out a piece of living dog's liver, rinsed it from blood, and plunged it into boiling water, all within ten seconds.

It is true, as he admits, that McDonnell, Meissner, Jager, and Schiff, among others, had already abundantly confirmed Pavy's state-

ment, that livers so treated never yielded any charine reactions to the proper chemical tests and that Bernard, on his side, had never controverted this, so that with the utmost goodwill we fail to see the point achieved by Dr. Flint's mediation between the French and English experimenters. Be this as it may, the candid reader is taken by surprise when, immediately after circumstantial details of Dr. Flint's experiments on the aforesaid dogs, and the negative evidence on sugar, of their liver extract, he turns on Dr. Pavy in this style, (p. 313): "It is difficult to imagine how any observer, so well known and accurate as Dr. Pavy, could assert positively, as the result of personal examination, that the liver does not contain sugar when examined immediately after its removal from the living body, when Bernard and so many others have demonstrated its presence in this organ in large quantities. Yet such was the result of all the experiments of Pavy, and the same conclusion was arrived at by McDonnell and afterward by Meissner and Jager, and by Schiff." Then, in a foot-note: "They took portions of the liver from living animals, and from animals at the instant they were killed by section of the medulla oblongata, plunged the tissue immediately into boiling water, and invariably failed to find sugar in the extract. They did not, however, recognise sugar in the blood coming from the liver, as in our experiments."

Well, Doctor, how can you find it "so difficult to imagine" how Dr. Pavy can assert, what you yourself reaffirm after observations (pp. 310, 311, and 312) on four luckless dogs, who hold you responsible for their boiled livers. One might fancy, if such slips of the pen were not so continually happening to you, that you bore Dr. Pavy some scientific malice, for having got the start of you and made his dog cry, "No sugar in my liver!" first. But the best of the joke is, that Dr. Flint believes the dogs are all quizzing their experimenters—that they have got sugar in their livers but won't show it, passing it out of the liver country cells as soon as manufactured, like contraband goods, by the hepatic-vein blood, in traffic with the lungs. Chemistry and physiology are playing a little game of thimble-rig with their liver sugar. The starch, called glycogen by Bernard, from its aptitude to become sweet glucose, and which all observers agree that all livers constantly secrete, is the main fact. Identical with animal glucose in its chemical composition, a few seconds of arrest, or of exposure in or out of the body, confer on it the taste and chemical reac-

of glucose. Pavy showed that this conversion could be prevented by sudden and in the heat or cold. Bernard had shown the spontaneous post-mortem conversion of liver starch into liver sugar before Pavy, while Pavy reverts the credit of first proving that a healthy liver stores no sweets in life. Neither of these explorers contest the discovery of the other, and Dr. Flint is not diplomatist enough to create between their claims a necessity for his mediation. The really important point in question now is, the hæmatisic function of the liver. Dr. Flint forbears to discuss it. He says in his first volume, about the liver, that he does not believe any particular organ charged with the formation of its corpuscles. In this third volume, however, he takes the analysis of Lehmann as very "curious." Lehmann estimated that the proportion of

white corpuscles in the blood of the hepatic veins was at least five-fold the proportion in the portal blood. He also noted certain differences in the appearance of the red corpuscles, which he explained by the supposition that the liver was the seat of development of these elements, which were formed from the white corpuscles, and that the blood of the hepatic veins contained a greater number of newly formed or rejuvenescent blood corpuscles."

This important confirmation of the views of our older physiologists receives additional force from the observations of Bernard, of Rouget, McDonnell, and others, on the presence and probable function of amyloid or glycogenic substance in epithelial cells of the placenta, before its appearance in the foetal liver. We can not, however, say more on this subject without leaving Dr. Flint, who guards a prudent reserve on the margin of the unknown.

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

JULY 14.

SO long a time has elapsed since the unpleasant occurrence to which I referred when last writing in my journal, that the sting is all gone, and I can now laugh at the recollection. Monday afternoon, June 26th, while washing the dinner dishes for Eliza, who is rather slow about her washing, a caller came in the shape of Miss Margaret Stanton, a lady whom I never see without the words "stiff-necked and perverse generation" coming to my thoughts. She had called before, but a number of other ladies being present at the same time, I had no definite impression in regard to her, except an uncomfortable feeling that a pair of curious eyes was peeping into every corner. She told me, after I had greeted her, that she had come to sit for a short time with me before she went to tea at another friend's.

I concealed my surprise at this proceeding from so much of a stranger as cleverly as I could, and set myself to work to entertain my grim visitor. This I found wholly unnecessary, as she proved to be bent, with malice intent, upon entertaining me with her views of a young

wife's duties. She plunged at once, *in medias res*, by saying:

"So you've begun right away keepin' help; that's the way with all the young folks now-a-days. For my part, I don't see what the risin' generation's a-comin' to. The young women don't seem to have no backbone to speak of, or, if they do have it, they don't think they've got any. Now, Mis' Sanborn, don't you s'pose you could do your own work—you're a well-looking young woman—I don't mean to say handsome; nobody ever found Margaret Stanton dealin' in flattery, and you don't seem to have no great beauty noways; but you look strong and healthy."

Her digression in regard to her victim's personal appearance gave me time to collect my thoughts, and I answered to her question—"Now, Mis' Sanborn, don't you s'pose you could do your own work?"—"I do." My reply was so unexpected that Miss Stanton did not know what to say next. She sat looking at me with the question on her face, "Why don't you do it, then?" but I did not choose to answer a question before it was asked by word of

mouth. She presently said, in a hesitating, uncertain way :

"Well, I never! I thought folks gen'rally was in the habit of doing what they could do, any how, if they was brought up in the country."

My first impulse was to say something sharp; my second, to say nothing more in regard to the subject. Henry says it would have served her right to follow the first one. Fortunately, I think, my better feelings came to my aid, and I said :

"I could do my housework very easily, Miss Stanton, for it is not heavy, and I learned enough about work at home to enable me to do very well; but my husband and I have concluded that I can find a better use for my time. A part of the housework I do, because I know that no exercise is better for a woman's general health than this. I do nearly all the sweeping, and the more delicate part of the cooking. Then I work in the open air every pleasant day at the flowers, and keeping weeds out of the small beds in the vegetable garden. An hour each day I spend in reviewing my old studies, and in trying to make further progress in them. Another hour I practise upon the piano and in singing. My sewing and reading occupy the remainder of my time, and from them I am always ready to be called, if my husband wants me to do any thing for his patients." Miss Stanton could bear it no longer, and she exclaimed :

"Do any thing for his patients! Gracious sakes! Are you a woman's-rights woman?" and, adjusting her spectacles, she drew a little further away from me, and scanned me from head to foot, as if to see whether I were clad in male costume.

"I quietly answered: "No, Miss Stanton, I am not a woman's-rights woman in the way you mean. But there is a great deal to be done for sick people which men can not do. Most of my husband's practice is among a class of people who know nothing of the common laws of health, and, when they are sick, know as little of the ways of getting well." Seeing that a different and softer look had come upon her face, I ventured still further away from the contested subject by speaking of a sick woman living near Miss Stanton's. As long as she remained I contrived to steer clear of allusions to the matter of housekeeping. I think I made a discovery—namely, that there is a sweet and tender kernel inside the shell of Miss Stanton's character. Perhaps, if she had married as young as I am, she might not be so gruff and

hard—not that being unmarried *ought* to make one hard and selfish and unfeeling; and I know it does not, if a woman tries to grow better; but so many people drift along just as it happens, following every impulse—at first repenting often, but never discovering that the true repentance is that which shows its fruits in a bitter word kept back, the hard thought subdued, the unkind act exchanged for one of charity and self-sacrifice.

Just before Miss Stanton left, I asked her advice about some raspberry jam which I am going to make very soon, and I found that talking of this sweet subject had a still further mollifying effect, and we parted much better friends than I should have anticipated at one stage of our talk.

I had but little time left after her departure to prepare for our visit at Dr. Hutton's, but a hurry kept me from dwelling upon Miss Stanton's disagreeable interference. The thought of it would now and then return, making me feel uncomfortable, but I put it from me as resolutely as possible, and it all passed away in the delight of our visit.

I shall be obliged to keep my account of our visit till another day, as I've been writing so long.

July 5.—What would some of the good Bostonville people say to inviting people to tea at giving them but one kind of cake. As I sat at Mrs. Hutton's table, I could not but think of the contrast between it, set with delicious food but simple and wholesome and of few kinds, and the tables at which I have visited, which were loaded with two or three kinds of hot biscuits, meats, pickles, rich preserves, and at least four kinds of cake, beside cheese, blanc mange, coffee, and tea. I remember the time when I thought a hostess in duty bound to lay an elaborate table for invited company, because of being a general custom; but I have come to the conclusion to be sufficiently strong-minded to obey my senses of the right and the judicious in this matter, and, while making a daily effort to be a good cook, never to set before my guests a motley meal of the kind I have mentioned. And, furthermore, *unexpected* guests must take us as they find us, without any apologies for what is upon the table, unless for an article of food really inferior. And this reminds me that I have not yet recorded my cooking experience. I am afraid I must confess to myself that I have been a little ashamed to mention some of my first experiments. As I become more courageous and self-confident, I must do this for Henry's amusement.

But to return to our visit. I have felt ever since as if I had realized the wish of my life, and had traveled in the easiest manner all over the European Continent; for, after looking for some time at Dr. H.'s choice paintings, we sat down by Mrs. Hutton's side to see what she calls her pet art treasure—a collection of the finest stereoscopic views that can be obtained of the celebrated natural and artistic wonders of the world. There were nearly a thousand different views, arranged in classes—one of alpine views; one of the most beautiful small sheets of water in different countries; one of English churches and cathedrals; one of the continental ones, both exterior and interior views from different points of observation; one of the most noted public libraries; one of groups of statuary which have won world-wide fame, and one of rooms in the greatest palaces of the world. Mrs. Hutton has taken great pains in her collection. The principal importers have made an arrangement with her by which they send her the best of their foreign views; from them she calls the finest, and over these she goes again, sifting them so thoroughly that nothing but the purest gold is left. I could only look at a hundred and fifty of them that evening, for it is very trying to the eyes. These were the alpine views, some of the English churches and cathedrals, and a few of the continental ones. It seemed most appropriate to me to take the English cathedrals and the alpine views in connection, for my feeling is that there is nothing in art more nearly approaching the sublimity of alpine scenery than the wonderful architecture of these cathedrals. The Continental cathedrals are far inferior in sublimity—they seem to have more of the worldly, less of the heavenly; there is about them that minuteness of detail and frippery that is one distinctive feature of Romanism. But I am criticizing them as if I had really seen them. Both Dr. H. and his wife made the views the more attractive by their comments. The early part of their married life they spent abroad. Mrs. Hutton, perceiving my intense enjoyment of the views, had a package of four hundred of them done up for Henry to bring home with him to look at at our leisure. I have found it difficult to avoid looking at them too long, they are so wonderfully fascinating. Yesterday, while hearing the shouts of boys in the streets, the firing of all kinds of noisy things, from crackers to cannons, I was quietly seated in Henry's study, the dearest room in the house to me, in the bow window, taking a peep into the different English libraries. I was dreaming over these pic-

tures, so that for a time I did not realize where I was. In this package had been placed, by mistake, two Alpine views, and their extreme beauty so struck me that I shall feel all my life as if I must have seen the place, and not the picture. The name has escaped me, but the scene was a deep, deep gorge in the mountains, at the bottom of which was a rolling stream, the bright tips of whose waves were reproduced in the photographs. A wooden pathway, much like a staging, was built at the side of the gorge, sometimes one side, sometimes the other, according to the shape of the rocks. In one place a sloping wooden roof was built over the pathway, to ward off the dripping of the tiniest imaginable stream, which might be seen hundreds of feet above making its way over the rocks. This dropping upon the heads of pedestrians would have been very damp and disagreeable, but the little amount of water warded off them and falling on the wooden roof, and thus infinitesimally shattered into the finest spray, glistening in the sunlight like golden dust, became a "thing of beauty" which will be to me, at least, "a joy for ever." So it often is with the events of our lives—repulsive in themselves, they may become beautiful recollections, if we meet them and treat them with the right spirit.

This view must have been taken at high noon, for at no other time could the rays of the sun have penetrated into this deep, dark place. As it was, the light was exquisite, all its variations of shadow and light appearing as distinct as they could have been seen by the traveler in his own person. Our own two dozen stereoscopic views are so indifferent when compared with these beautiful ones, and I was once very fond of them. Henry had never been guilty of the poor taste of buying those poor, made-up, painted views, which we so often see, but had bought to the best of his knowledge. We have learned that seventy-five cents spent for one picture, like those of Mrs. Hutton's, are better invested than for three ordinary ones.

There was a portrait in Dr. Hutton's library which attracted and rivetted my attention. There was, too, a man and a woman. The woman's face, though irregular in feature, was so full of womanly sweetness and power that I inquired about it. It was the portrait of Dr. H.'s mother. I have thought a great deal about her since, for the face told a story which should be that, in a greater or less degree, of every woman who is a wife and mother. The portrait was taken when Mrs. Hutton was quite young, but it is full of the promise of wonder-

ful qualities as a wife and mother, which promise was amply fulfilled, as nine sons, all good and influential men, now testify.

July 6.—I did not expect, in my devotion to my favorite theory, to have our little home turned into a hospital; but it was so to be. As I was putting away my journal the afternoon of the 4th, I heard a tumult in the hall, which proved to be caused by Henry, who, with the aid of two men, was bringing a boy into the house who had been wounded by his ignorant use of firearms. With true Irish aim, he had contrived to hit himself instead of the object intended, and he was in a sad state. The accident occurred near our house, and it would have been very dangerous to move him, even if any one had known where his home was. Just as Henry had finished dressing his wound, the boy's mother appeared in great excitement, and would have treated us to a series of Milesian wailings had not Henry vetoed the demonstration.

July 8.—My Topsy's sympathies are so enlisted in Jim Mahony's behalf that, for the time being, she seems to have forgotten her beloved babies. She is a capital nurse. Her gentle way of moving about the room, and her intuitive knowledge of what to do for the sick boy, would do credit to a person of better education and experience, and is very surprising to me, when contrasted with her performances, which I find myself incapable of preventing. When she has behaved particularly well, exciting a hope of her becoming eventually quiet and domesticated, she is sure to follow her good behavior by some most objectionable action. She has scaled the roofs of the house and all the outbuildings, is familiar with the tops of the trees, and a few days ago was seen by one of the neighbors hanging from the window of her room, holding fast to the sill with both hands, and with a rope attached to her waist, which, as afterward appeared, was fastened at the other end to her bedstead. I attempted to frighten her in regard to her danger, but do not think I succeeded. I sometimes fear that my theory of "like mistress, like maid," will not bear the test of practice.

July 9.—I have remained at home from church to-day to keep some kind of order in the house. It being a leisure day for the Irish, there has been a concourse of them in sight all day. The boy's mother has the charge of him to-day, and seems grateful for what we have

done for her son. A most suspicious number of cousins has called to make inquiries, in hope of coming into the house, but Mrs. Mahon makes a great and apparently an unexpected show of indignation, greeting nearly all the cousins with the same firm "Arrah, an' now d'ye think I would be imposin' upon the doctor an' his lady by allowin' ye to be overrunning the house; and whin, too, I know it's the binnysfishil thing for the bye to be quite." Probably, if the boy were at home, there would be little recollection of the necessity of keeping him "quite."

July 11.—A most unexpected event has occurred. A letter came last evening telling me at the same time of the death of Aunt Betsey in Illinois, and of her having left me the whole of her large property. The only stipulation that she made was that I should use the property as nearly in accordance with her own manner of employing it as possible. By this she meant that I should spend a good portion of the interest of the property in personal charity. I trust that I may assume the responsibility with the right spirit. My love of and respect for good Aunt Betsey will help me to imitate her example. The property is in such a form that we shall be obliged to go to Illinois to attend to it, and shall start as soon as the Irish boy can be removed to his own home. Dr. Moody will take charge of Henry's patients during our absence.

A DOG FOR A MELANCHOLIC MAN.—

Next to a merry child, we do not know so good and healthful a companion for a melancholic man as a dog. He does not call over the roll of your ails with dolorous intonation, nursing and petting them by recital, nor does he answer you by combatting your splenetic fancies. He just ignores them so innocently that you ignore them too. If, after a convivial evening, you awake with a pound of lead in the epigastric regions, spiders in your eyes, and mephitic vapors coiling through your brain; if the day looks cold and dark and dreary, and you feel half inclined to try the "bare bodkin" remedy, rather than grunt and sweat under a weary life, just draw on your clothes and open the door to your dog. See what a delirious good morning he has for you. How he leaps upon you, and sprinkles you all over with cool, fragrant dew, which he has brushed from lilacs and violet borders! How his eyes flash, and his tail wags like an excited pendulum.—*Ex.*

The Various Kinds of Longevity.

BY E. RAY LANKESTER, B. A., OXFORD.

GREAT as is our ignorance with regard to longevity in all that relates to accuracy and detail, yet there are a few patent facts within every one's experience which it is well to consider at once. Firstly, various individuals enjoy various durations of life. That men, cats, mice, bees, and buttercups live for different periods of time, is matter of experience; and not only this, but all men do not live equally long, nor all cats, nor all bees and flowers. Hence every individual has its own longevity, if we understand that term to mean duration of life. On looking a little further, we readily discover that there is a closer agreement as to duration of life (though we can not deal with accurate numbers) between the individuals of the same species than there is between the individuals of different species; and though the individuals of the same species exhibit great variation in their length of life, yet there is a probable duration which characterizes the species, and is the same, therefore, for all the individuals. We thus, then, have *individual* and *specific* longevity. But when we try to form some more definite notion of this "specific longevity," great difficulties have to be encountered.

By "specific longevity" we may mean the *average longevity* of the individuals of a species—that is, the average duration of life of all the individuals born; and had we data for various organisms as we have for some groups of mankind, we should speak of this period as the expectation of life at *birth*, and could assign to it a fixed quantity, as is done for men. On the other hand, a very different term is that which we usually speak of as the "longevity" of this or that race, family, or species. Howsoever ignorant we are of numbers in this matter, though it is even difficult to define what are the limits of the period to which we refer, yet, in speaking of "longevity" of groups of beings, we usually mean the potential longevity—or "lease of life," as Mr. Grindon terms it—and do not allow the average longevity, affected as it is by disease and accident at all periods of life, to enter into our consideration.

The term "mortality" is usually applied to the question of average longevity, and hence, in accordance with general convention, longev-

ity may be understood to refer to potential longevity. Once for all, here it may be pointed out how slightly these quantities can affect each other, though they are to a certain extent related. Mortality has been largely studied in the case of man, and much more is known of it than of longevity in his case; but among animals and plants generally, vastly important as mortality is in regard to the necessities of life and of organisms, there is as little known as in the matter of longevity. That the average longevity of a group of individuals is but slightly related to the potential longevity, appears from these considerations. From enemies preying upon the "young ones," or from disease, or from a severe struggle for food, or from the accidents of dispersion, vast numbers of the individuals of the group may die at a very early age; those, on the other hand, which do survive, may live to a period of time quite unaffected by the conditions which acted on them in early stages of existence. Thus, from great destruction of young, the average longevity may be brought very low, and not indicate directly at all the potential longevity. It is clear that a very high potential longevity will materially raise the average longevity, while a low one will somewhat diminish it; on the other hand, the chances of life may be the better in each individual of the survivors from the fact that the average longevity has been lessened by the destruction of numbers of the weaker and unhealthy among the young. It is clear that the subject of mortality is so distinct from that of longevity that it can not enter largely into consideration on the present occasion.

While we have fixed terms to give us the means of comparing average longevities, what have we that corresponds in the case of potential longevity?

This matter has not been fixed by any authority, even in the case of man, who is indeed the only animal of which there are sufficient facts known to enable one to use in any way such a definite indication of potential longevity for comparison. Statisticians frame tables for various groups and classes of men, in which the probable after-lifetime or expectation of life is calculated for any given age. The expectation

of life at birth obviously indicates the average longevity of the group, but at what period of life does the expectation fairly indicate the potential longevity? It might be answered at once that, as a matter of course, the highest age attained by any individual of the group—that is, the greatest individual longevity, is the measure of the potential longevity of the group; but we must remember, in dealing with a large number of cases, not to mistake abnormal or exceptional cases for normal ones, and not to base conclusions for a group on such cases. In the case of man, as noted again below, this may be of less importance, but with the various organisms of the animal and vegetal kingdoms we can not justly say that the longevity proper to a species is indicated by the greatest longevity attained by an individual of the species. In searching for some terms to be used as indicating the potential longevity where statistics are available (and where they are not, guesses and estimations based on the few existing data must take their place), the probable after-lifetime of an individual, when it has attained the average longevity of the species, might be taken arbitrarily as fixing the potential longevity of the species. But it seems better, though less precise, to use the probable after-lifetime of an individual at that age when it has passed some crisis, such as the maturity of the reproductive organs, or other similar crises, as the case may be, for the purpose of giving fixed terms of comparison as to potential longevity. It is, perhaps, scarcely worth while speculating as to what may best serve this purpose, since in no animal or plant are we in a position to make use of any decision on the matter, and in the case of man it will be seen that it is not much wanted. The day may, however, come when sufficient observations will have been made on lower organisms to render such a fixed point of comparison useful.

Potential longevity differs then in different species (as a glance at the statements as to longevity below will fully prove), and agrees within certain limits in individuals of the same species. Why is this? It is, no doubt, because the particular structure and habits of each species in some way require or entail the particular limit or lease of life. But how is this effected? Does the life of a given species receive its limit simply through the operation of the particular or specific external agencies (to which the species is born and specially constructed to meet) on each individual born? Undoubtedly this is so to a large extent. For man may take an animal lower than himself in the scale of life,

or a plant, and by his care and attention, by removing the agencies to which the creature is born, and carefully substituting others, may cause it to live much longer than it could possibly do if left to its natural conditions. Thus man may take a bird, and by providing it with food, and protecting it from competition with its fellows, from accidents and enemies, from the want caused by weakness in old age, protract its life. Parrots, thus, live even one hundred years, and goldfinches twenty-three, which there is good reason to believe is far beyond their length of life when in a "state of nature." So lions have lived in menageries to be forty to sixty years old (Haller), being fed after the loss of their teeth and the blunting of their claws. Insects have been so kept for three or four years; and many plants by attention are made perennial or biennial, whereas in natural conditions they would be annual. It will probably be admitted that man has this power in many cases without further illustration.

Hence we must again qualify or analyze potential longevity as applied to species; for there is one period which is proper to the species in its normal conditions, which it can not by any struggles of its own extend, hedged in as it is by those very conditions in relation to which it has either been created, or by which it has been evolved. There is a second period which is equally proper to a species (as far as experiments tell us), which man can make evident by removing some of the natural conditions and substituting others, which, however, has its limit, beyond which limit no power that is known can extend the life. The first period may be called Normal Potential Longevity, the second Absolute* Potential Longevity.

Man himself, in his civilized form, is continually bringing his intelligence to bear on his own longevity, thus changing conditions as no other organism can, and consequently in his case normal and absolute potential longevity are merged. It is the development of unprecedented and overpowering intelligence which interferes in the case of man, and separates him in this, as in other matters, so greatly from other organisms. His intelligence enables him to take many precautions with advancing years; it leads him to form communities and organizations in which the active and young protect and minister to the aged. This great peculiarity in man, and the more than specific differences of condition which his all-adapting

* Absolute is used for want of a better term; it is only "absolute" within man's experience.

renders possible in various groups of individuals with less than specific difference of structure, makes it desirable to consider him apart from the rest of the organized world in such a matter as longevity.

When a man exerts the greatest care to protract the life of certain organisms, he yet finds that death will come and limit the period. There is a limit to absolute potential longevity nearly enough in many organisms, and this limit, which may be termed an inherent one, must, of course, act in limiting normal potential longevity. What is it that constitutes this limit, are all organisms subject to it, and how does it become inherent? It appears that in some organisms we can not clearly say from observation that there is such an inherent limit; in fact, their absolute potential longevity appears to be very nearly practically unlimited; but we may suppose that it has a remote limit which is difficult to observe on account of its distant character. Such organisms are fish, mollusks, large crustacea, annelids, many trees and seaweeds. In other organisms, on the contrary, there is distinctly observable a natural inherent limit to life, which is inevitable, however carefully injurious and destructive influences are kept off, which makes its approach felt with the advance of years, in that state which is called "natural decay" or "senility." Men, other mammals and birds, some reptiles, insects, some lower invertebrates, and many plants, exhibit this condition of things very obviously. In some, as insects, and some low forms and protozoa, the action of this "natural decay" is far more powerful than it is in the other cases, and we see these creatures dying clearly under its influence; in others it is less obvious, and hence we may suppose that in the former group, where natural decay appears to play no part, its apparent absence is merely a matter of degree, and that it is simply reduced to a minimum.

That the time of the on-coming of this period of natural decay—i. e., the limit of absolute potential longevity, varies strictly and largely in different species, and proportionately to the normal potential longevity, is difficult of absolute proof in the absence of experiment; but it will probably be admitted from common experience as to ageing, and some facts bearing on it, which it is needless to particularize, are given in the statements below.

What we are then endeavoring to examine in various species of lower animals and in man—namely, normal potential longevity, varies in accordance with two sets of influences, the ex-

ternal agencies, acting directly on individuals, and an inherent limiting agency. To the first, all organisms are severally subject; the second seems to possess a very small power in some. Both these are hereditary influences, as is implied in their truly specific character; the inherent is so by hypothesis, the external agencies are less obviously so, being indirectly inherited by the transmission of structural capacities and necessities involving the same details of life in the offspring as in the parent.

Not less hereditary is that average longevity which was spoken of as constituting the study known as "mortality." It, equally with potential longevity, is a specific character as truly as a tuft of feathers or an additional antonny joint, and is determined by the reciprocal relations of the "environment" and the "organism," and with a constant organism it can not vary, while, if the "environment" is not constant, the organism must become a new species on the evolution hypothesis, or cease to exist on the special-creation hypothesis, being no longer fitted to its conditions. The close relation of the average longevity to the welfare of the species is seen in cases where man has interfered with this quantity, as in game-preserving. Gamekeepers killed "vermin," i. e., hawks, weasels, foxes, etc., which were in the habit of diminishing the average longevity of the grouse by destroying weakly birds. The vermin being destroyed, the average longevity was unduly raised, and as a consequence we had the grouse disease, which threatened the extinction of the species. Other such cases might be actually pointed to or conjectured.*

We have then these three quantities of life—the normal, the absolute, and the average longevity, each one of which, in its unequal distribution, we are entitled to assume, is fitted to the requirements of the specific organism, either by special design, or by the gradual evolution of relations. By inquiring what the correspondences are, we may endeavor to frame some general propositions as to the causes affecting longevity, and thus be the better able to examine the question of man's longevity. It is seldom, on account of the small knowledge available, that the term "absolute potential longevity" will have again to be used.

* Such, for example, are the diseases of domesticated animals, and of civilized man himself. The incapacity of some plants and animals to become established in a new country may be attributed, in many cases, to the absence of some cause—nature's sanatory police—which would check undue average longevity, and thus maintain a healthy stock.

The Wooing.

UP among the apple flowers
Bessie whiled the April hours.
O'er her head the pink and white
Wove a diadem of light ;
But it told no fairer grace
Than the blushing maiden's face.
Now and then the branches stirred
At the breezes' whispered word.
Now and then, in fragrant showers,
Dropped the petals from the flowers.
Once there came an ampler fall,
With its sweetness showering all ;
And, like mimic storm of snow,
Fell the flakes o'er all below.
Down upon her open page
Floated soft the mute message,
And with finger at the place,
Gazed she down, and saw a face—
Saw a face that sent a gleam
Through her dreaming reverie.
With a smile she tapped the limb,
Leaned, and thus she spake to him :
" Sir, and if it pleaseth thee,
Come up here and sit by me."
Lightly climbed he up the ladder,
Smiling, seated him beside her.
Long they sat there, hand in hand,
Whispering in accents bland—
Whispering things I do not know ;
It might be—traffic ; I don't know.
Bessie had a fair-haired brother ;
Never sister loved such other.
Laughing as the bob'link was he,
Busy as the honied bee ;
Roguish as the squirrels gay
That chase the sunbeams all the day.

As they sat, there came a sly
Boyish hand and merry eye.
Down in much surprise looked they,
Saw in laughter float away
Flaxen curls and footsteps small,
Dimpled cheek and ladder—all.
Long they sat there, hand in hand,
Whispering in accents bland—
Whispering things I do not know ;
It might be—love ; perhaps 'twas so.
With a mild and noble mien
Walked the good man, slow, serene ;
Like one in a pleasing dream,
Strolled he through the sunset's gleam ,
Clasped behind his manly hands,
And anon he stops and stands ;
Hears the robins in the trees
As they load the evening breeze
With their melody of song,
Ere the shadows steal along.
And in wonder noticed he—
Ribbons in the apple tree ;
Faces, too, which in surprise
Gazed into his sober eyes.
Then his thoughts were backward thrown
O'er the primrose long o'ergrown,
Long o'ergrown by poplars white
And syringa's mellow light.
As the ferns their details throw
O'er the purling brook below,
Thus a vision of the past
O'er his memory's page was cast,
And obedient to the fates :
" Come, my children, supper waits."
Once the moon was new again,
And the lovers questioned : " When ?"
And they sought the mother's aid,
" Why should longer be delayed ?"
And the mother smiled and said :
" I am ready—thou may'st wed."

Then they begged her, "When?" and "Where?"
 "When?" she asked, "I do not care;
 "Where?"—and at that queried word,
 The brother's bird-like voice was heard—
 "Where?" and with a laugh quoth he,
 "What sayest to the apple tree?"

HOUGHTON.

Hints about Thought.

BY F. B. PERKINS.

TIMES without number has Bacon been quoted, sometimes correctly and sometimes wrongly, as follows, however, and the words are accurate:

"Reading maketh a full man, conference a ready man, writing a correct man."

Very well so far, old friend; now have you nothing to say about Thought?

He has, elsewhere; abundance of it. So have (literally) thousands of other writers. Yet is the just consolation of every new author that new treatment is far more agreeable than new matter. So that, provided even a half-dozen of paragraphs come with freshness and vitality out of one's mind, he need not be troubled because abler men have handled the same subject daily for three thousand years and more.

Three hints about thought are far more likely to do good than three libraries, even if but one out of the three be really practical, and though not one be new.

Practically, it is experience that furnishes thought. It is fortunate that mere common sense, or instinct, if you choose to say so, develops whatever thought is necessary for common life. The farmer, the merchant, the lawyer, find no need of being taught to consider what they want to consider, any more than of being taught to eat what they want to eat. They require to be brought up in decent, good habits—that is all. Metaphysics is a science of mental operations; and perhaps the best book in the world on the subject is one that I possess; first, because it is so short—it is only a little 18mo. of about a hundred pages; and second, because it shows "The Nullity of Metaphysics" (i. e., of their received methods). Besides, any body who has studied the history of mental science knows that it is the most nearly

barren in proportion to extent and zeal of cultivation of any field of human study. It is a flat sand. Innumerable men have drawn diagrams on it, but the wind has smoothed them, or the next comer has erased them and substituted his own. You can trace the effects of theological systems, and of political ones. Government, fertility, population, have advanced or receded, according to the operations of a creed or a platform. But who can show a ruler, a city, a human being, a tree, a penny, the more or the less, the better or the worse from Des Cartes's laborious treatise of "How to Conduct One's Reason," from Locke's treatise on "The Human Understanding," from Dugald Stewart's "Philosophy of the Human Mind," from Sir William Hamilton's great discovery of "The Quantification of the Predicate?"

Metaphysics are the barren, double-petalled blossoms of the mind. By the necessity of their being, what enables them to be showy prevents them from being useful. They leave neither seed nor fruit.

What is to be of use as regards thought must, I believe, have an ethical character in most cases. Thus, the notions I set out to submit are as follows:

Leaving out the concerns of every man's own daily business, it is worth considering that the chief objects of thought may be called three.

1. An end—to know the truth.
2. First means—by tracing cause and effect.
3. Second means—by comparing and generalizing.

And it is obvious that a search after truth must have a moral quality as well as a mental one. No man of a naturally deceitful character can succeed in such a pursuit, or teach success to others; nobody can point out any such person who ever has. And yet the cheat needs

know the truth as much as the honest man. In their dealings with it that they differ. One seeks it as a diamond, to possess; the other catches for it as for a snake, to avoid.

Now, presumptuous as it seems, I must suggest that Lord Bacon's proposition is extremely erroneous. Whatever he has said elsewhere about thought, neither the sentence I have quoted, nor the "Essay of Studies" from which it is taken, have any thing about thought in them, except indirectly. And, in the second place, writing does not distinctively make a correct man. Reading is exactly as necessary, conference is exactly as necessary. Each of them trains in what is equally indispensable to correctness.

Reading giveth facts; conference compareth and correcteth judgment; writing classifieth and crystallizeth conclusions; reflection fuseth and rectifieth and judgeth all, and prepareth to continue and renew the usefulness of all the rest. I fear not to compare that recipe with Lord Bacon's, so far as practical usefulness is concerned. Nor am I presumptuous in doing any more than I should be in claiming to know a better way to make some experiments in natural science.

In the noble "Essay of Truth," which is the first of the series, the same great man observes, with paradoxical shrewdness: "A mixture of a life doth ever add pleasure." Is this true? They say that nutriment too concentrated is not healthful; that meal, for instance, extended with mere chopped straw or bran, say to the quantity of twenty pounds, nourishes a horse more than twenty pounds of pure meal. Is falsehood a stimulating bran for the mind?

But how much clearer and higher is that sentence a little further on in the essay: "Truth, which only doth judge itself, teacheth that the inquiry of truth, which is the love-making or wooing of it, the knowledge of truth, which is the presence of it, and the belief of truth, which is the enjoying of it, is the sovereign good of human nature."

Neither the correctness of the thought, nor the profound strength of the similitude twined with it, can be mended, I believe.

For using either of the two means which I suggested, and for attaining their end, no one quality is more necessary than independence.

Let me now try to furnish an instance which shall a little illustrate the incomplete frame of imperfectly stated propositions above laid down.

What is the truth about the French and German war?

Evidently, one needs to know something

about the character of the two peoples and of their governments; something of their history; something of human nature at large, and of European history at large, before having the material for an independent, intelligent judgment. That implies not merely the examination of a few books now, but a competent course of historical reading. This will show that the Germans are (as between the two nations) educated, the French not; that the Germans are free (comparing the two always), and the French not; that the Germans have been governed (recently) with a view to their good as a people, the French not. What is probable, now, of two nations, who compare thus, on the point of right and wrong? I answer, the Germans are most likely to be right. As between equal numbers of men, which are likely to be strongest? The Germans.

Thus far the facts are accordingly. But there is little risk in trying a little further. Which of the two people is likely to be able to run a republic? The Germans.

Are the French in a condition to carry on a republic at all? No.

What is their probable near political future? An effort to live as a republic, which will break down after more or less time, and will be succeeded by some form of monarchy.

But many people believe the French Republic would succeed this time?

No. They haven't republicans enough to fill a hackney coach, and amicably agree upon the directions to the driver.

What is a republican? He is *not* merely an individual who is allowed to vote. He is an individual intelligent enough and good enough to be entitled to vote; sufficiently confirmed in self-control to substitute that self-control for a law driven on to him from the outside, like a hoop on a bursting barrel; and, by virtue of his ability to control himself, fit to meddle with the control of others. Republicans are made, not born.

It will take weeks to show whether some of those judgments are right, and years, perhaps, for others. I wonder if any body who reads them will remember them? Taken together, they illustrate the notion of tracing cause and effect (*viz.*, in the result of the past experience of the two nations on their present state); of my notion of comparing and generalizing (*viz.*, in my balance of conclusions about two such nations); and even further, in an attempt to determine a future state of things—that is, to divine a future truth, with reasonableness enough to make it fit for a sensible man's belief.

STUDIES IN HYGIENE.

THE SANITARY CONDITION OF SCHOOLS.

—It is well known that in many cases our schools are foci of contagion, and the means of spreading contagious diseases. Children are frequently sent to school, not only from families where contagious diseases are present, but actually with disease upon them. No trouble should be spared to prevent this, and if necessary a law should be enacted preventing those who are infected from thus spreading around the destructive diseases. Nor is this all that is required. The schoolrooms should be well ventilated, clean, and not overcrowded. Every school should be placed under the superintendence of the medical officer of health of the district in which it is placed, and he should report periodically to the School Board on the state of the school and on any departure from sanitary rules. Cleanliness should especially be encouraged and insisted on among the children attending the school, and, if no means exist at home, baths and lavatories should be provided at the schools.—*E. L.*

So says a well-known English writer on hygiene. The same general principles are quite as applicable in America.

FEWER BORN, BUT MORE SURVIVING.—

We look around us and see many invalid or childless women. We say, "The Pilgrim mothers were not like these." Perhaps not, for if so, those who are now called the Pilgrim mothers would have died before reaching that dignity. Is it better for the race that a girl should die of small-pox in childhood than that she should live to be married and have but two children instead of a dozen? We cheat ourselves by this perpetual worship of the pioneer grandmother. How the young bachelors who write dashing articles in the newspapers denounce their "nervous" sisters, for instance, and belabor them with cruel memories of their ancestors. "The great-grandmother of this helpless creature, very likely, was a pioneer in the woods; reared a family of twelve or thirteen children; spun, scrubbed, wove, and cooked; lived to eighty-five, with iron muscles, a broad chest, and keen, clear eyes." But no one can study the genealogies of our older New England families without noticing how many

of the aunts and sisters and daughters of imaginary Amazon died young. I think there may be the same difference between the households of to-day and the Puritan household that there is confessedly between the American families and the Irish; fewer children are born but more surviving.—*T. W. H.*

VENTILATION IN LECTURE ROOMS.—

T. W. H. a gentleman who introduced Miss Anna E. Dickinson, on the occasion of her recent lecture at Steinway Hall, in requesting for her a fair and patient hearing, cited a recent case in which several of the audience had—improperly, as I thought—left the hall before the completion of the lecture, and reminded his hearers that Wendell Holmes, after personal examination, had once ascertained the cause of a similar phenomenon to be a full brain. But there are two sides to this matter, and the hearers, who pride themselves handsomely to be entertained, have rights as important as those of any lecturer. A polite audience will consent to sit quiet, even when uninterested, if they are comfortable. Make them uncomfortable, and there is an end of forbearance. When Senator Sumner delivered his address at Steinway Hall on the 1st inst., it was disgracefully close, and the majority of his hearers, who sat in the body of the hall, were restless, drowsy, and miserable. To sit still for an hour or two, under such circumstances, is simply to feed the mind at the expense of the body. It is a species of mild debauchery, for which one is sure to suffer in the flesh next day. Yet if a man, to relieve his oppressed lungs, goes out, he is uncharitably accused of having a full brain, or of being ill-bred or offended. It should be superfluous, and yet it appears to be necessary, to remind lecturers and lecture-room managers that an essential element of success to their entertainments is the infusion of the pure air of heaven into their halls.—*Tribune.*

PREVENTING SCARLET FEVER.—

The prevalence of scarlet fever in England is so great that great attention is being paid to the means by which it is propagated. Among other things the laundry is challenged; and the suggestion of danger in this direction is well worth careful consideration. Clothing is infectious, and the infection may be communi-

ed unless the greatest care is taken to disinfect and to keep suspicious clothing from contact with others in the wash, whether at public or private laundries.—*Christian Union*.

THE HERALD OF HEALTH has within the past years published a large number of carefully prepared papers on preventing and curing scarlet fever. We call special attention to the one in the January number for 1871.

STUDENTS NOW AND THEN.—There are doubtless many moral and physiological sins committed, tending to shorten and weaken life; but the progress of knowledge more than counterbalances them. No man of middle age can look at a class of students from our older colleges without seeing them to be physically superior to the same number of college boys, ten or twenty-five years ago. The organization of girls being far more delicate and complicated, the same reform reaches them less promptly, but it reaches them at last. The little girls of the present day eat better food, wear more healthful clothing, and breathe more fresh air than their mothers did. The introduction of india-rubber boots and waterproof cloaks alone has given a fresh lease of life to multitudes of women who otherwise would have been kept bed-ridden whenever it so much as sprinkled.

It is desirable, certainly, to venerate our grandmothers, but I am inclined to think, on the whole, that their great granddaughters will be the best.—*T. W. H.*

TOOTH WASH.—The mouth has a temperature of ninety-eight degrees, warmer than ever experienced in the shade in the latitude of New England. It is well known that if beef, for example, be exposed in the shade during the warmest of our summer days, it will very soon begin to decompose. If we eat beef or dinner, the particles invariably find their way into the spaces between the teeth. Now, if these particles of beef are not removed, they will frequently remain till they are softened by decomposition. In most mouths this process of decomposition is in constant progress. Ought we to be surprised that the gums and teeth against which these decomposing or putrifying masses lie should become subjects of disease? Much has been said *pro* and *con* upon the use of soap with the tooth-brush. My own experience, and the experience of members of my family, is highly favorable to the regular morning and evening use of soap.

Castile or other good soap will answer this purpose. (Whatever is good for the hands and

face is good for the teeth.) The slight unpleasant taste which soap has when we begin to use it will be unnoticed. You have observed upon the teeth a yellow deposit, sometimes a black substance near the gums. If you examine either of them with a strong microscope, you will find it all alive with animalculæ. These small animals live, keep house, and raise families of children, and die in your mouths. Nothing that can be safely introduced into the mouth checks them like soap.—*Medical Investigator*.

We would ask the writer of the above if he has examined the deposit on the teeth with a microscope for animalculæ? We do not doubt but living creatures are sometimes found in the tartar of the teeth, but it is far from being general. The importance of cleaning the teeth after each meal, however, is none the less, even if living creatures are never found in the tartar of the teeth.

WOMAN'S WORST ENEMY.—Of the worst foes that woman has ever had to encounter, wine stands at the head. The appetite for strong drink in man has spoiled the lives of more women—ruined more hopes for them, scattered more fortunes for them, brought to them more shame, sorrow, and hardship—than any other evil that lives. The country numbers tens of thousands—nay, hundreds of thousands—of women who are widows to-day, and sit in hopeless weeds, because their husbands have been slain by strong drink. There are hundreds of thousands of homes, scattered over the land, in which women live lives of torture, going through all the changes of suffering that lie between the extremes of fear and despair, because those whom they love, love wine better than they do the women they have sworn to love. There are women by thousands who dread to hear at the door the step that once thrilled them with pleasure, because that step has learned to reel under the influence of the seductive poison. There are women groaning with pain, while we write these words, from bruises and brutalities inflicted by husbands made mad by drink. There can be no exaggeration in any statement made in regard to this matter, because no human imagination can create any thing worse than the truth, and no pen is capable of portraying the truth. The sorrows and the horrors of a wife with a drunken husband, or a mother with a drunken son, are as near the realization of hell as can be reached in this world, at least. The shame, the indignation, the sorrow, the sense of disgrace for

herself and her children, the poverty—and not unfrequently the beggary—the fear and the fact of violence, the lingering, life-long struggle and despair of countless women with drunken husbands, are enough to make all women curse wine, and engage unitedly to oppose it everywhere as the worst enemy of their sex.—*Dr. J. G. Holland.*

OVERTAXING CHILDREN'S BRAINS.—The extent to which over-mental strain is injurious to the young varies according to the kind and character of work. The endeavor to fill the minds of children with artificial information leads to one of two results. Not frequently in the very young it gives rise to direct disease of the brain, to convulsive attacks, or even to epilepsy. In less extreme cases, it causes simple weakness and exhaustion of the mental organs, with irregularity of power. The child may grow up with a memory taxed with technicals, and impressed so forcibly that it is hard to make way for other knowledge, and added to these mischiefs there may be, and often is, the further evil, that the brain, owing to the labor put on it, becomes too fully and easily developed, too firm, and too soon matures, so that it remains throughout manhood always a large child's brain, very wonderful in a child, and equally ridiculous in a man or woman. The development in an excessive degree of one particular faculty is also a common cause of feebleness.—*Dr. Richardson.*

POTATOES BAKED vs. BOILED.—The object of cooking and preparing food should be that of rendering the articles of diet valuable as nourishment to the organs and tissues of the body. But how few cooks understand the best methods of preparing nourishment that it may be easily digested and subserve its purposes. Take, for instance, potatoes, which are a common article of diet, particularly among the poorer classes. The ordinary method of cooking them is to boil them in water, mash, and prepare for the table. Now the nutritive properties of the potato consist mainly of starch and earthy salts, such as potash, soda, lime, etc. By boiling in water the salts are mostly extracted, as is shown by analysis of the liquid—that each pound of the potato, when boiled until it is soft, yields fifteen or twenty grains of potash, and a small quantity of lime and soda. These salts are essential to the blood in order to maintain it in a healthy condition; so in order to get the full benefit of the potato thus cooked, it would not only have to be eaten, but

the broth to be drunk. A potato, then, nutritious, should be baked in a hot oven, eaten as soon as it is soft.—*Dr. Paine.*

Potatoes boiled with care, and taken from the pot before they are cracked open, do not lose very much of their nutritive value, though it is true that they do lose some. We do not believe, however, that the loss is so serious as *Dr. Paine* thinks. There are some potatoes which are unfit to eat when boiled, yet when baked they are excellent.

RELATIVE TEMPERATURE OF THE RIGHT AND LEFT SIDES OF THE TRUNK.—Observations have been made by *Edward T. Blake, M. B.* which corroborate, if possible, the views expressed by him in a letter written last June. From experiments on himself and others after exercise, he arrived at the following results: 1. The temperature of the two sides of the trunk under usual circumstances—that is, in health and at rest, in a temperate climate—is equal. 2. Under certain conditions, as exercise, the temperature of the left side of the trunk may exceed that of the right side. 3. The excess during exertion, in a cool atmosphere, averages half a degree Fahrenheit. 4. The excess reached during exertion in a powerful sun.

SMOKING AGAINST ONE'S WILL.—Tobacco smoke, examined by the microscope, is seen to hold little globules of nicotine twisted and sitting about in it. The statement is made by *Dr. Sigerson* that "some remained on the walls of the mouth; when the smoke is breathed (by novices) more globules are retained in the lungs, and nausea and illness supervene. The globules, if found in the air distributed by a tobacco smoker, might be taken for germs."

So says an eminent microscopist and hygienist. It is unfortunate that those who do not wish to smoke can not well help themselves. Smokers are not usually so thoughtful of the rights and feelings of others as they should be. The inconvenience and suffering they occasion to others is far greater than they imagine. Can they not remember the rights of others as well as their own?

A GIGANTIC MUSHROOM.—*Dr. W. Witsch* (The Food Journal) has recently met in Africa with an enormous edible fungus. It is said to be as large as an umbrella, a single specimen sufficing for the support of twenty men. The flavor of the flesh is very delicate. In the Præsidium of Bong-Andongo the plant is now in market at 1s. 3d. apiece. Persons who

mushrooms should be careful and choose only those varieties that are not poisonous. Their number is few. Mushrooms have no great nutritive value, nor are they very delicious—still, for variety, they may be useful at times.

A HINT TO WATER-DRINKERS.—Nearly three years ago, Mr. S. Dana Hayes, State Assayer and Chemist of Massachusetts, had occasion to investigate the causes leading to the very rapid corrosion of the metallic ice-water pitchers which were made at that time in immense quantities, and of which large numbers are still in use, though they are being gradually supplanted by those lined with glass or enamel. He was then surprised to find them, to say the least, such a source of danger; and since that time he has seen several cases of lead poisoning attributable to no other cause than the use of water from these metallic pitchers. These pitchers, as is well known, are formed with double walls. The outer case and the side walls are of Britannia metal, and the bottom of German silver or copper soldered to the sides. The whole is more or less thickly electro-plated with silver inside and out. Now, when the inner chamber is filled with "common alkaline, aerated, or other corrosive water," it becomes a mild galvanic battery, increasing in power with age; the sides being composed of tin, antimony, and copper, and the bottom of copper, or of copper, zinc, and nickel together, while the solder is composed of lead and tin. Of course, in such a state of affairs, the lead of the solder is readily attacked; and the author found a large amount of this metal in water which had been allowed to remain 12 hours in an old pitcher, though the water used, being from the Cochituate, was comparatively pure. One pint of water, after one hour in the pitcher, contained perceptible traces of lead. After four hours it contained 0.35 grains; after twelve hours, 0.80; after twenty-four hours, 1.45 grains. The author draws attention to the fact that this was equivalent to 2.80 grains per gallon, even at the end of four hours, while less than 0.01 grain per gallon has injuriously affected health, and cites this as another proof of what M. Gueneau de Mussy insists upon—namely, "That contact, even mediately, between lead and other metals should be avoided in the construction of all reservoirs destined for the conservation of water for family use.—*American Chemist*.

Our readers who buy pitchers for ice-water should see that they are lined with non-metallic and non-corrosive substances. Glass is best.

SOFT WATER.—This is water that gives a feeling of softness in washing, from the absence of certain mineral substances, which render it rough or hard. Rain water may be taken as a fair example, for, when caught in the open country, it is the purest water that Nature provides. It is not entirely free from foreign matters, however, for, as it falls through the air, it absorbs oxygen, nitrogen, carbonic acid, ammonia, and organic substances, and also washes out any impurities which the atmosphere may happen to contain. Thus, in the vicinity of the ocean the air contains traces of common salt; in the neighborhood of cities, various saline, organic, and gaseous impurities, while dust is raised from the ground and scattered through it by winds. These are all rinsed out of the air by rain. In passing through it, water becomes highly aerated—that is, acquires an atmosphere of its own, which contains from ten to fifteen per cent. more oxygen than ordinary air. This gives to water its agreeable taste.

Soft water, which is free from dissolved mineral matters, makes its way into organized tissues with much more readiness than hard water. It also exerts a more powerful solvent or extractive action, and is thus a better vehicle for conveying alimentary substances into the living system. In culinary operations, where the object is to soften the texture of animal and vegetable compounds, or to extract from them and present in a liquid form some of their valuable parts—as in making soups, broths, stews, or infusions, as tea and coffee—soft water is much to be preferred.

In consequence of its aeration, rain water is both healthy and pleasant as a beverage. The greatest benefits have resulted in many cases from its use, where the spring and well waters were largely impregnated with earthy salts.—*W. J. Youmans, M. D.*

TEA-TASTERS.—The avocation of a tea-taster is to take a sip with a quick inhalation, and thus a small shower of fine tea-drops enters the lungs. On examination, a considerable quantity of tissue from the leaves is found, which aids to tease the lungs. But the real agents of mischief are numerous little drops of essential oil, very plentiful in Assam tea, and are particularly severe. Nausea, derangements of the nerves, and sometimes syncope afflicted them.—*Scientific Review*.

Tea-tasters are, as a rule, short-lived and nervous. Their occupation is at variance with all the laws of health, and their sufferings are proportionate.

RECIPES FOR WHOLESOME COOKING.

PIES.

PIES, as commonly made, are any thing but wholesome; they form inferior kinds of food. Made as they should be, they are both wholesome and delicious. The best of all pies is made from the apple. The crust should be thin, the fruit good pie-apples, and plenty of them, put between the crust. Where the two crusts meet on the edge of the dish, care should be taken to have the apples pressed out, so that there shall not be a wide strip of thick crust with no apples near them. An apple pie should be eaten just after it is cool. If eaten while hot, it is apt to go down only half masticated, and the effect of the heat on the tongue tends to destroy the finer sense of taste. After an apple pie is one day old it begins to grow stale, unless it is kept with great care. Soyer, the famous London pie-maker, thinks that if all the spoilt pies made in London on one single Sunday were placed in a row beside a railway, it would take an express train an hour to pass them in review. In cities many pies are spoilt every day, mainly because badly made. Whoever will induce bakers to improve their methods of making them, will be a public benefactor. The usual price for a piece of pie in a New York restaurant is ten cents. They could be afforded for half that price, at a profit, too, if there were no spoiled pies.

PIE-CRUST.—In Mrs. M. M. Jones's excellent "Hygienic Cook Book," are a large number of recipes for making pies and pie-crust. We extract two of the recipes for the latter.

POTATO PIE-CRUST.—Boil one quart dry, mealy potatoes. The moment they are done mash them, and sift through a collander. Stir thoroughly together one cup of graham flour and one cup of white flour, then add the potatoes, rubbing them evenly through the flour in the same manner as the shortening in common pie-crust. Have ready one cup of corn-meal; pour over it one and one-third cups of boiling water, stirring it till all the meal is wet, then add it to the potatoes and flour, mixing only till thoroughly incorporated together. No more flour should be added. The molding-board should be well covered with dry flour, however, as it is slightly difficult to roll out. It should be rolled very thin, and baked in a moderate oven.

It is very essential that the above conditions should all be complied with. Bear in mind that the potatoes must be *hot*, and mixed immediately with the flour; the water be poured, while *boiling*, upon the corn-meal, and the whole mixed together very quickly and baked immedi-

ately. Inattention to any of these requisites will be quite apt to insure a failure.

CREAM PIE-CRUST.—Take equal quantities of graham flour, white flour, and Indisa meal; rub evenly together, and wet with very thin sweet cream. It should be rolled thin and baked in an oven as hot as for common pie-crust.

This makes excellent pastry if properly baked. Many patients have said to us they did not see how they could ever again relish the pastry in common use (this is so much sweeter and more palatable, to say nothing of its wholesomeness). It is more generally relished than the potato crust.

Mrs. Jones gives the following method for making

SOUB APPLE PIE.—Take nice tart apples—spitzenbergs are best, although pippins, greenings, russets, etc., are excellent; slice them; fill the under-crust an inch thick; sprinkle sugar over them; add a spoonful or two of water; cover with a thin crust, and bake three-fourths of an hour in a moderate oven.

A Health Cook Book published in London gives the following recipe for

APPLE PIE.—Peel and cut about two pounds of apples, sharp ones being the best for the purpose; cut each into four pieces, removing the cores; then cut each quarter into two or three pieces, according to the size. Put half of them into a pie-dish, slightly press them down; put over them two ounces of brown sugar; put in the remaining apples; then add another two ounces of sugar, making the apples form a kind of dome, the center being two inches higher than the sides; add a small wine-glass of water; cover the top with paste, and bake in a moderate oven from half to three-quarters of an hour.

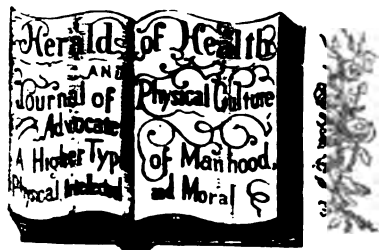
The recipe which follows is for making a species of apple pie, or apple cake, as it is sometimes called:

APPLE CAKES.—Mix unbolted wheat or rye-meal with cold water, making a dough or batter soft enough to nearly level itself. If shortening is desired, use sweet cream or butter. Fill a rather deep pie-plate about a third full of the batter, and sprinkle over a little sugar. Wash, quarter, and core tart apples, and place as many in the batter (skin side up) as it will hold. They may be pressed down and leveled with a stiff spoon. Over the top sprinkle some sugar, and bake till nicely brown.

This cake is both wholesomely nutritious and delicious. Children and grown folks can eat of it freely without danger of injury.

We purpose in THE HERALD OF HEALTH for 1871 to devote considerable space to recipes for wholesome food, and we invite our friends everywhere to send us those which they know to be good, that we may place them before our large circle of readers.

EDITORIAL DEPARTMENT.



NEW YORK, FEBRUARY, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as indebted for every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.

Exchanges are at liberty to copy from this magazine giving due credit to THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

THE BEST GOVERNED PLACE IN THE WORLD.—There is a paragraph going the rounds of the papers, to the effect that at the Industrial Exhibition in Paris, a few years ago, 1,000 francs were awarded to Vineland, N. J., for being the best governed town in the world. It is claimed that the secret of this good government arises from the fact that no alcoholic drinks are sold, or consumed there. If total abstinence has done so much for the order and peacefulness of Vineland, what would it not do in New York? Is not the experiment worth trying? If it should prove a success here, all the cities and towns on the continent would adopt it. People who drink liquor to any extent

rarely get on in the world. The dram-seller's till catches all their surplus earnings. There are manufacturing houses in New York where the workmen get drunk on Saturday night, and Sunday, instead of being spent in moral and intellectual culture, is spent in dissipation. On Monday, and often Tuesday, the men can not work because of their prostrate mental condition. Thus two or three days are lost, beside the loss of earnings which ought to be put in a savings bank to accumulate for investment in a home, and the loss of self-respect, health, and the confidence of friends. The greatest sufferers from drink are the poor; drink keeps them poor. They can no more rise with the weight of drinking habits on them than a bird could rise in the air when chained to a rock, or a man can swim with a mill-stone around his neck. With extensive knowledge of those who drink liquor, and those who do not, we have no hesitation in saying that the most temperate people are the most successful in accumulating wealth. In nine instances out of ten we know that the people in New York who can not pay their taxes, their grocers' or board bills, are those who drink. In nine cases out of ten, those who become paupers, thieves, and murderers, drink. In short, drink reduces the wealth, the order, the virtue, the health, the happiness of people, more than all other causes combined.

The example set by Vineland on the question of Temperance, is a royal one. No personal liberty is outraged by the law. Every year the people vote on the subject, and they vote against selling liquor during the coming year, and all peaceably submit to the decision of the majority. In New York this is of course impossible, because the majority is on the other side. The minority submit as gracefully as they can, as in Vineland, except the results are so bad in New York, that Temperance people protest more than they would, if good gov-

ornament and order resulted from liquor-drinking. The great work to be done in New York, and in all other cities similarly conditioned, is to work to increase the number of Temperance people and a greater interest in the cause. It is a more important subject for agitation than any other. Ordinary politics pales before it. To secure good government is the object of politics. If it can be done most effectually by preventing the sale of liquors, it is a remedy well worth a careful and long-continued trial.

A MERITORIOUS ARTICLE.—For numberless years it has been the opprobrium of American cookery that it employed an agent in raising dough that was deleterious to health, and decidedly objectionable to those whose sense of taste is refined and delicate. Saleratus cookery, yellow to the eye and of alkaline taste in the mouth, has long been the target for physicians and hygienists to aim their denunciations at, and deservedly, too. It always takes time, however, to bring about any reform of magnitude, and therefore people have continued to use deleterious alkalis for raising such articles of food as required it, leaving it for the chemist and hygienist to devise something better at their leisure. This has been done by J. Monroe Taylor. His Cream Yeast Baking Powder has been tested by us with great care and used with much satisfaction for over a year at the Hygienic Institute, where a hundred people are fed daily. Our corn gems, and other forms of food made light with it, are the delight of all. Not a particle of alkaline smell or taste is to be found in them; for the article, known as Cream Yeast, is not an alkali, but is made principally from the acids of grapes. It renders shortening almost unnecessary, brittleness and tenderness being secured with half the amount otherwise required. We always intend to use the best and most healthful articles in preparing food for our table, and, unless somebody discovers something better, we shall stick to this. Our kitchen matron says it always produces reliable results. We hope and believe it will speedily take the place

of the vile compounds now generally used. To render this tribute freely, as due to a man who has helped to bring about a reform of great magnitude, as affecting the health and happiness of the race.

MISS GARRETT.—This accomplished and wealthy young lady-physician, who resides in London, is deservedly very popular in England, though, like American lady-physicians, she sometimes meets with opposition and abuse. She is about twenty-five years of age, has hair as fair as any German maiden, which she wears in neat braids. The abomination of heavy wigs, which she has discarded, and the wigs which she does not indulge in. Her complexion is clear and beautiful, her features good, and her expression extremely pleasant.

In the sick-room she must prove a blessing. She is fond of athletic sports, and so highly esteems the art of swimming, that for six years she made persistent efforts to acquire it. As a member of the school board with Prof. Huxley, her influence will be felt in education. There seem to be some mean spirits in this board, however, for, though Miss Garrett was elected chairman by a large majority, yet, a woman not being eligible to the office, she was prevented from taking the chair. Such is prejudice.

MONOPOLY BY MALE MEDICAL STUDENTS.—An obstacle of a very serious character has been thrown in the way of the women who are studying medicine at the University of Edinburgh. They have been refused admission to the Edinburgh Royal Infirmary, and are thus cut off from the two years' hospital attendance which is indispensable for graduation. This refusal to admit the lady students is flagrantly unjust and founded on false pretenses; for, as the objections of the five hundred male students to the presence of eight ladies in the wards does not extend to the "mixed audience" of women nurses and women patients, it can not be regarded as other than a subterfuge.

In addition to the ladies' memorial to the

managers of the Royal Infirmary, several of the University Professors presented a memorial also to that body on behalf of their lady pupils. They strongly deprecated the exclusion of female students as an act of "practical injustice," and they stated distinctly, that from the experience they had already had of male and female students on the same benches in lectures on Anatomy and Surgery, they find that "in these mixed classes the demeanor of the students is more orderly and quiet, and their application to study more diligent and earnest, than during former sessions when male students alone were present."

The memorials were without effect. The ladies have been excluded by the managers of the Infirmary. No doubt in a few years this proceeding will be viewed in its true light as a base and unmanly monopoly.—*Rebecca Moore.*

As opposition is the life of business, so are the obstacles thrown in the way of woman by the medical schools, nerving them up to greater strength to overcome them.

HYGIENIC HOUSES IN NEW YORK CITY.—

I take great pleasure in calling the attention of the readers of *The Laws of Life*, to this long established Hygienic Institution of Wood & Holbrook, at 15 Laight Street. In company with Miss Austin, and Mr. and Mrs. Johnson, I had, a few weeks since, the opportunity of being there for a few days, and was greatly pleased with the evidences of success of the proprietors in their business. The house, since they took it, is not carried on exclusively as a water-cure or infirmary, but is as well a boarding-house kept in good measure on hygienic principles. The situation for a hygienic boarding-house is perhaps not excelled by any in the city. Central to nearly all the business circuits of the city, it readily accommodates such business men as want to live upon healthful food while in the city.

Growing in popular favor as hygienic ideas are, it is a matter for congratulation to all hygienists that an establishment exists in New

York, where they can get well-cooked, yet healthful food, with clean beds and pleasant attention.

Drs. Wood & Holbrook are also owners of *THE HERALD OF HEALTH*, a very ably conducted and prosperous health journal. They are both comparatively young men, married each to a woman who is in truth a helpmeet to her husband, and are doing great good. Neither the members of my family, nor myself, will soon forget the great kindness shown to us while we were their guests. In the words of Mr. Joseph Jefferson, in his great play of *Rip Van Winkle*, we all lift our glasses of water and say to Messrs. Wood & Holbrook, "Here's to your health, and the health of your families, and may you all live long and prosper."—*James C. Jackson, M. D.*

A VETERAN IN THE CAUSE.—*MR. A. Morehouse*, who has taken *THE HERALD OF HEALTH*, in all its changes, for twenty years or more, writes thus enthusiastically in renewing his subscription for 1871. Mr. Morehouse fully appreciates the value of a health journal. The monthly visits of such a journal are a constant reminder of the laws of health, and should form a part of the literature of every household quite as much as a political journal, or one devoted to agriculture and horticulture. But to the letter:

"**EDITOR OF THE HERALD OF HEALTH**—*Dear Sir:* I commenced reading your publication more than twenty years previous to 1871—it was then called *The Water-cure Journal*. By its teaching I have learned to live without being sick, and I believe it to be one of the best publications I have ever read. I used to be sick a great deal, had some very hard spells, and doctor'd a great deal; but since I commenced reading your journal I have had no more fevers, nor have I taken any more of what is called medicine. Counting my doctor's bills and the loss of time before I read your journal, it does not cost me half as much to live. I have not taken a dose of medicine for more

than twenty years, nor have I been sick a day in the last twenty years, nor have I drank a cup of tea or coffee in twenty years. I am now in my 71st year, and am a farmer, and during the last harvest I worked through the grain and hay harvesting, and did a full hand's work for young men. Some of the young men thought I got along easier than they did. More than half of the time I gathered the sheaves and shocked after the reaper, which I never had a hand do for me, and some of the men said they never saw a person do it before. I will not say any more, as you may think I am bragging.

"Yours truly,

"A. MOREHOUSE."

"TO THE EDITOR OF THE HERALD OF HEALTH—*Dear Sir:* Allow me to inquire through your journal what diet you would prescribe for children from two to ten years of age, of strong mental temperament and slender bodies. I am anxious to know how I can best develop their bodies. My boy of seven years of age takes a number seven bat, and weighs but little over thirty pounds. His general health is much better than it was one year ago. Is there any particular objection to Indian-meal bread or rye bread? I do not like to trouble you, but I am anxious to learn. We do not send him to school now, and keep him out of doors as much as possible in pleasant weather. Why I ask so particularly about corn-meal is this: a phrenologist that lectured here last spring said I ought not to give him corn bread, because it is so heating. He is very fond of it.

"AN ANXIOUS MOTHER."

ANSWER.—Give your children plenty of the best bread and milk. Unleavened wheat-meal bread is excellent. Well made corn-meal bread, rye bread, and oat-meal bread are good. The phrenologist who objected to corn-meal bread did not know very much about bread, we think. Children need abundance of wholesome food. If they can not have it they will be dwarfed and stunted. Good fruit is appropriate, and it's a re not, as many suppose, objectionable.

EDUCATED NURSES.—A late writer in Fraser, discussing the demand for educated women in the sick-room, places the proper maximum price for a skilled nurse at three guineas per day, which is certainly higher than they are at all likely to obtain. "A gentleman who educates his daughter as a nurse," the writer says, "has provided for her future as securely as for that of his son, to whom he has given a profession."

The demand for educated nurses must be much greater in England than in America, on the supply very meager, to allow of such prices as the writer referred to mentions. Three guineas per week is more likely to be the truth. The demand for educated nurses ought greatly to increase. Being more useful than the physician, they will do much to save the lives of the sick, when an ignorant nurse would do harm. Education, however, is not the only qualification needed. Some are good nurses by nature. Healthy and happy themselves, they impart health and happiness to others. As a magnet magnetizes bits of iron with which it comes in contact, so do they magnetize, so to speak, patients for whom they care. If the sick would choose a good nurse, let them do it with reference to natural as well as acquired talent.

A NEW YORK LADY-SURGEON IN PARIS.—Dr. Mary C. Putnam, of New York, is shut up in Paris, and is aiding the cause of France as surgeon. Miss Putnam is the daughter of the well-known publisher of this city. She has been pursuing medical studies abroad for a number of years, and has distinguished herself as a brilliant student and an accomplished woman. If she ever returns to New York, she will be welcomed by hosts of warm and admiring friends.

DIED OF OLD AGE.—In the month of October 309 persons died in San Francisco, California. Of these 107, or over one-third, were under two years of age. In contrast

with this excessive mortality of the children is the statement that one person died of old age. There, also, as well as almost everywhere, consumption kills more than any other disease—being the number of its victims.

AMOUNT OF WATER NEEDED FOR DAILY USE.—

Q.—“What amount of water is required daily for the use of an adult person?”

ANSWER.—For drinking purposes, from three to five pints. About one-third of this is contained in our food. The balance must be supplied in drink. Women drink less than men, but children, in proportion to their weight, more. In hot weather the amount is more, in cold weather less. In cities the amount required for all purposes usually averages from twenty-five to forty gallons. In New York, where the waste is great, much more is used. In Paris only thirty-one gallons are supplied to each person. It is estimated that in case of scarcity of water four gallons per day would be the least amount that ought to be used, and this would not admit of daily bathing.

While on the subject we may add, that for bathing purposes, the amount of water required varies with the kind of bath. For a full bath in a bathing-tub, a barrel is about the proper amount. For a hand bath six quarts is none too much. For a shower bath five gallons is sufficient, and for a sitz bath three or four gallons may be enough; and for that best of all baths, the Turkish, a barrel of water will be none too much; and even this would have been considered a meager supply by the ancient Romans, who headed not less than ten barrels per head in their largest baths.

Animals require much water, varying according to size, food used, work done, and other circumstances. A horse requires eight gallons a day. A cow will drink six gallons, a sheep two to three quarts. An ox requires a little more than a cow, a mule a little less than a horse, while an elephant will use up nearly a barrel.

The amount required by sick persons is about double that necessary for well ones.

WHAT IS, AND WHAT CAUSES CONSUMPTION.—It is now an established fact that pulmonary consumption is not primarily a disease of the lungs, but one involving the entire organism of the body, having its origin in defective digestion and the violation of the rules of health in dress, exercise, amusements, etc. In short, every thing that tends to impair the integrity of the body, create debility and disturb the equilibrium of the mental forces, has a corresponding tendency to develop tuberculous or consumptive diseases; hence, reading novels and other fictitious literature that produces a morbid condition of the brain, impairs digestion and tends to develop consumption. So with amusements, theaters, operas, and other places of entertainment that tend to produce a long and continued feverish condition of the mind, withdrawing the vital forces from the digestive and assimilating organs; they weaken the body and develop the disease. A want of proper rest taken at the proper time; occupations that confine persons in a vitiated atmosphere; schools in which the mind is too long kept upon a stretch, and large numbers of children crowded into imperfectly ventilated rooms; the use of pastry, tea, coffee, rich and poisonous confectionery, imperfect dress, too close confinement in-doors, irregular habits, and every other cause that weakens the body and impairs digestion, acts either as an exciting or direct cause of pulmonary consumption.—*Medical Investigator.*

THE HEALTHIEST TOWN IN NEW YORK.

—The Cooperstown (N. Y.) Journal publishes a list of the deaths in that town during a year, which is a somewhat remarkable record. It shows that of the 20 persons who have died, 2 being young children, only 7 were under 62 years of age, 10 were 70 or upward, 4 were over 80, and 1 was over 90. The average age of the 20 was 55 years and 1 month; the average age of the 18 adult persons was 66 years and 6 months. The population of the place is 2,000.

Cooperstown may, we think, be considered the healthiest town in New York. If not, we should be glad to know it.

How to Treat the Sick.

HOW TO GET THE MOST GOOD OUT OF THE NEW HYGIENIC TREATMENT.—If I were to say to a seriously sick person, "To get well you must give your mind to it," my advice would doubtless be set down as a piece of gratuitous stupidity by most people, since the general rule is that we behold an incompetent mental condition accompanying complete physical prostration. And that is precisely why so many very sick people can not get well—because they are incapable of giving their minds to it.

But you would see no inconsistency were I to say to the devoted and self-appointed nurse of this sick person, "To get him well you must give your mind to it." Yet, doubtless, under Providence, if nine-tenths of the people who fall ill and die, for lack of proper treatment and good nursing, were to heed the first alarms, which are always sounded a good long while beforehand by the physical system, and in good time give their minds to getting into a healthy natural state again, they would not be reduced to the strait of putting their lives into the hands of the doctor and the nurse. And in a case which is of vital individual importance to you, the will of a third person is never so effective as your own would be.

To do any thing well, you must give your mind to it. People understand perfectly that to learn a language, to engineer a car-load of passengers over a railway, to build a house, or to write a book, you must give your mind to it. But they utterly ignore the application of this great elementary principle to a task which, in proportion, is often as difficult, as delicate, and as complicated as any of these.

The most wonderful machine that was ever created is out of order and needs to be laid up for repairs. In some way, its wonderful motive power has been abused, and it has grown cranky

and will not work well. It is good policy to heed the first signs of internal trouble. On with the brakes and run her into some quiet retreat for an oiling of creaky places, and a general funishing up, and a leisurely examination of her whole condition. If you are not willing to do this, and if you grudge the time that it takes, you must make up your mind to running off the track at some moment when you least expect it, and certainly to some catastrophe more or less fatal.

There are some people who think that it doesn't matter how a thing is done, so that the thing is but done; and who have never yet learned that for every thing that is worth doing there is but one way of performance, which is the right way, and that there are no two right ways of doing any one thing. These people will tell you that they have tried the Water-cure on themselves at home, and that there is nothing in it, that it is all a humbug. The truth is, that a successful application of the water treatment requires an amount of experience and a command of appliances not to be compassed by a raw novice, in a private house. The new hygienic treatment is, and professes to be, simpler than the old medical theories; but it is based on principles much more profound than those which have presided over the formation of the materia medica, and it is just about as absurd for any uninformed person to fancy that he can treat with water and electricity, for any serious ailment, with success, as for him to suppose that he could assume the risk of a difficult surgical operation. Indeed, the risk assumed in such cases is very great. An acquaintance of mine had derived great benefit from a season passed in a Water-cure establishment. I believe she was cured there of some painful ailment, and ever after she was enthusiastic in recommending cold wet packs to her friends on the slightest opportunity. One day, going to see a neighbor,

she found her flushed and languid, and complaining of dullness about the head; and, delighted to be of use, our amateur doctor at once insisted on being allowed to prepare a cold wet sheet. The sick woman had not been in the habit of using cold water to any great extent, and feebly refused. But at length she was wearied into compliance by her friend's persistence.

The consequence was, that when her husband, who was sent for in a great hurry, came home an hour later, he found her suffering from an acute attack of inflammatory rheumatism; her face red and hot, and her eyes starting almost out of her head. Six months were required to repair the mischief done in one hour by a treatment not adapted to the case and constitution of the patient, and given at a critical period. That this lady should ever afterwards hold all Water-cures in mortal terror, was but a natural result of her experience; yet, doubtless, had the proper Hydropathic treatment been given by an expert, her illness would have been averted and herself greatly benefited.

I am entirely against having people who are not doctors trying to doctor themselves for any serious ailment, and I especially want to discourage any body from trying Water-cure treatment on an extended scale at home, unless they know a good deal about it from experience. If you do not exactly know what to do for yourself, you are just as likely to hit upon the wrong thing to be done as the right thing. You, perhaps, do not even know what is the matter with you, though you fancy you do.

If you are really in a bad state of health, and have decided on water treatment, you should give it the fairest possible trial, as combined with new Hygienic methods, and that you can only do at a good establishment.

I have hinted before that the great secret of getting well is to give your mind to it, while you still possess sufficient vigor to do this; for the furtherance of this end, aside from all medical considerations, it is a wise provision which takes the patient out of the old routine of cares and duties, and breaks the spell which

holds his anxious mind chained to his accustomed pursuits, by throwing him among entirely new scenes, and placing upon him new obligations. Indeed this is half the task which is involved in curing a chronic disease. It is impossible to give one's mind entirely to the business of getting well, surrounded by the causes which have induced ill health. The mind is too much accustomed to the tread-mill habits into which it has been forced to be easily coaxed out of them. "I will rest to-morrow; but there is a piece of unfinished work at my elbow which I think I ought to do to-day!" And so it goes on, and to-morrow is like to-day, and one day is but a simile for another. Left to ourselves, we will never take the rest and rightly pursue the treatment which we need, until it is too late to be of any use! And this is what makes a good Hygienic establishment such a capital place for invalids. There you must give your mind to getting well, and your time also; and all temptations to do otherwise is carefully withheld. And this is the great secret of treating chronic disease. If you want to master it you must give your whole strength to the contest.

Abused nature, like a jealous mistress, refuses to share a divided attention. Give her your best endeavors, and she will thrive vigorously.

A man who smokes tobacco, and who pours liquid fire down his throat at intervals, and is given to late hours, must not expect the least benefit from any sort of treatment until he has broken with these three habits. Women need not suppose that they can smuggle in half-bushel chignons and tight corsets, and poisonous cosmetics, and apply them in conjunction with spray douches and full hot baths, with any sort of benefit. You must make your peace with violated Nature, before her chaste handmaidens, the Water-nymphs, can do you any good.

The greatest blessing conferred by the Hygienic routine passed at health institutes, is that it inculcates sound physical habits in the ignorant, and puts the forgetful ones in mind of what they owe to Nature. "Treat her well, and she

will treat you well," is the principle on which these establishments are founded. — *Howard Glyndon.*

PAINTER'S COLIC.—Being a great sufferer from that dreadful disease, I have thought perhaps a few words about it would not come amiss. Most every one has some remedy that will cure the colic, but after the disease has once got a strong hold of a person I have found there are very few if any of the remedies that will even give relief for the time being. The old idea of drinking whisky and other liquors is all humbug, and many a painter has found when too late that it only made his case worse.

I know of a case, personally, where a man died with the colic just after drinking a lot of whisky. All the medicines the doctors could give him were useless, the whisky benumbed his body, and the consequence was that he died. Drinking milk was recommended to me, and I think if I had commenced when the colic first attacked me it would have saved me much suffering, and perhaps cured it entirely; but I did not commence until after the third "grip." By that time the disease had so firm a hold on me that it was impossible for any thing to have any effect. I drank from one to two quarts of milk per day. Eating plenty of ripe fruit is another good remedy, for it helps to work the poison out of the system and keeps the bowels loose at times when you may have or expect a "grip." Thank Heaven, the day has come when carriage painters are no longer obliged to use lead for filling up the wood; and if there is as much painter's colic in carriage-shops as of old, it is now the painter's own fault.

Since Valentine & Co. succeeded in making a *Permanent Wood Filling* that answers all the purpose of lead, there is no need to get the painter's colic. — *An Old Painter.*

HEADACHE.—*To the Editor of THE HERALD OF HEALTH*—Dear Sir: "I have just been reading a piece in your last issue, called, 'What it Costs to have a Headache,' and in it

you say people should know enough of hygiene to be able to avoid headache. If there is a particular mode of living by which headache can be avoided, you would put me and numerous others of your readers under great obligations by publishing it."—*A Subscriber.*

ANSWER.—We can not go into an elaborate answer to our correspondent, but will say,

1. That two-thirds of the headache which women suffer comes from indigestion and an engorged liver. This comes from either eating bad food, too much food, or taking too little good exercise. They either exercise in the open air too little for the food they eat, or eat too much for the exercise they take. As most women now dress, it is almost impossible for them to take such exercise as they need to promote digestion and circulation. Close-fitting clothing about the waist prevents, in the little exercise they take, the ends for which it is intended. Wholesome exercise out of doors and good food are the remedies. Of course, there are other forms of headache, that have other causes. Of these we will not speak here. Men who labor out of doors have little headache compared with women. Their vigorous exercise prevents the digestive apparatus from becoming clogged and foul.

POISONOUS EFFECTS OF BEE-STINGS.—**PREVENTIVE.**—*Messrs. Editors:* The poisonous effects of a bee-sting can be prevented, or at least considerably mitigated, by passing over it the pipe of an ordinary trunk key.

The reason is obvious. The pipe acting as an annular compress close to the puncture, forces the poison out. Could not this simple process be extended in its application to the bites of serpents and rabid dogs? The absorption and spread of the virus might thus be prevented, or at least retarded, until a physician could arrive with a more effective remedy. — *Scientific American.*

In this department we desire to present practical knowledge. Such of our readers as have valuable information on appropriate topics are respectfully requested to furnish the same.

Food for Mirth and Thought.

WALLACE ON THE ORIGIN OF MAN.—Man may have been, indeed I believe must have been, once a homogeneous race; but it was at a period of which we have as yet discovered no remains, at a period so remote in history that he had not yet acquired that wonderfully developed brain, the organ of the mind, which now, even in his lowest examples, raises him far above the highest brutes; at a period when he had the form but hardly the features of man, when he neither possessed the human speech nor those sympathetic and moral feelings which in a greater or less degree everywhere now distinguish the race. Just in proportion as these truly human faculties become developed in him would his physical features become fixed and permanent, because the latter would be of less importance to his well-being; he would be kept in harmony with the slowly-changing universe around him by an advance in mind rather than by a change in body. If, therefore, we are of opinion that he was not really man till these higher faculties were fully developed, we may fairly assert that there were many originally distinct races of men; while, if we think that a being closely resembling us in form and structure, but with mental faculties scarcely raised above the brute, must still be considered to have been human, we are fully entitled to maintain the common origin of all mankind.

WHY THEY WENT TO WAR.—A certain king, it is said, sent to another king, saying, "Send me a blue pig with a black tail, or else—" The other, in high dudgeon at the presumed insult, replied, "I have not got one; and if I had—" On this weighty cause they went to war for many years. After a satiety of glories and miseries they finally bethought them that, as their armies and resources were exhausted, and their kingdoms mutually laid waste, it might be well to consult about the preliminaries of peace; but, before this could

be concluded, a diplomatic explanation was first needed of the insulting language which formed the ground of the quarrel. "What could you mean," asked the second king of the first, "by saying, 'Send me a blue pig with a black tail, or else—?'" "Why," said the other, "I meant a blue pig with a black tail, or else some other color. But," retorted he, "what could you mean by saying, 'I have not got one; and if I had—?'" "Why, of course, if I had I should have sent it." An explanation which was entirely satisfactory, and peace was concluded accordingly.

The unhappy war now going on between France and Germany, which has caused the death of so many people, and so much horror and anguish, might have been settled by a few kind words. The story of the two kings related above is not only a lesson to other rulers, but also to all. Most of the quarrels between individuals are quite as foolish as the war of the blue pig with a black tail.

A NEW REASON.—Here is a new and excellent reason for not taking tobacco. Mrs. Goss, of Orland, Me., is just dead at the enormous age of 107 years. It is stated in her obituary notice that during her whole life she was especially addicted to the use of "the weed." Now, if it is to be one of the results of nicotian indulgence that its votary *may* live to be 107 years old, a sensible man, rather than run any such risk, will pitch his pipes and his plugs out of the window. Does the reader remember those horrible creatures mentioned in "Gulliver's Travels" who could not die. They became about so old, and there they remained for ever, a nuisance to themselves and to their fellow-creatures. Even Dr. Swift never imagined any thing more horrible.

PUNCH says that in some parts of England the water is so hard that skating on it is kept up all through the summer.

ABERNETHY'S DISLIKE OF UNNECESSARY TALK.—People who came to consult this eccentric man took care not to offend him by bootless prating. A lady on one occasion entered his consulting room and put before him an injured finger, without saying a word. In silence Abernethy dressed the wound, when instantly and silently the lady put the usual fee on the table and retired. In a few days she called again and offered her finger for inspection. "Better?" asked the surgeon. "Better," answered the lady, speaking to him for the first time. Not another word followed during the rest of the interview. Three or four similar visits were made, at the last of which the patient held out her finger free from the bandages and perfectly healed. "Well?" was Abernethy's monosyllabic inquiry. "Well," was the lady's equally brief answer. "Upon my soul, madam," exclaimed the delighted surgeon, "you are the most rational woman I ever met with."—*Jeaffreson's Book About Doctors.*

A SINGULAR TRUTH.—It had been well said, that the one great solitary character in the multitude of the people is persecuted and put to death. Five such characters are outlawed, hooted at, and despised. Double their number, make them ten in a thousand, they are passed by and silently neglected. Increase this number, let them be a hundred in a thousand, or one in ten, their power is recognized, but resisted. When they are so far multiplied as to be one in five, their word is listened to with respect; their hour of triumph approaches. But still the process consists in a slow production of individuals, each of whom counts one, and all of whom constitute one, through their allegiance to the same principles and their sympathy with the same ends.—*O. B. Frothingham.*

AN OLD LADY was recently brought as a witness before a bench of magistrates, and when asked to take off her bonnet obstinately refused to do so, saying, "There's no law compelling a woman to take off her bonnet." "Oh," imprudently replied one of the magistrates, "you know the law, do you? Perhaps

you would like to come up and sit here, and teach us." "No, I thank you, sir," replied the old woman, tartly; "there are old women enough there now."

A SHORT MEMORY.—A worthy clergyman in a neighboring town is very sent-minded and has a short memory. It is a common habit with him in the pulpit to forget something, and then, after sitting down, to rise up again, and begin his supplementary remarks with the expression, "By the way." A few Sundays ago he got half through a prayer when he hesitated, forgot what he was about, and sat down abruptly, without closing. In a minute or two he rose, and pointing his forefinger at the amazed congregation, he said "O by the way—Amen!"

DELIRIUMS TREMENDOUS.—A negro was brought up before the Mayor of Philadelphia a short time since, for stealing chickens. "Well, Toby," said his Honor, "what have you got to say for yourself?" "Nuffin but dis boss: I was as crazy as a bedbug when I stole dat 'ar pullet, cos I might have stole de big rooster, and never done it. Dat shows 'clusively to my mind dat I was laboring under the deliriums tremendous."

POISONING BY WORM LOZENGES.—Dr. B. D. Gifford reports to the *Boston Medical and Surgical Journal* a case of poisoning a child three years old, who had eaten seven "worm lozenges."

Parents who take **THE HERALD OF HEALTH** avoid these troubles.

"**MADAM,**" said a cross-tempered physician to a patient, "if women were admitted to paradise, their tongues would make it purgatory." "And some physicians, if allowed to practice there," replied the lady, "would soon make it a desert."

A PHYSICIAN said of a quack that he was "such an ignoramus that, if he could take a lantern and go down inside his patient, he would not be able to find out what the matter was."

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Weak Lungs—Position During Sleep.—"When quite young I had a severe attack of bilious fever, which affected one of my lungs. Since then I have enjoyed perfect health, yet the least over-exertion or excitement causes me to puff like a small steam-engine, and partially lose self-control. Does this indicate any unsoundness of the lungs? Is it more healthy to sleep on the side than on the back? Is it not injurious to the ear to have the side of the head pressed down on a pillow?"

Your lungs may not be diseased, but they are weak. They need strengthening and expanding. Take all the out-door exercise you are able to, but avoid over-exertion and excitement. A course of gymnastic training would be an excellent thing for you. If that is not practicable, practice rowing, exercise with Indian clubs or upon a "Home Gymnasium."

For healthy persons the position for sleep is upon the back, for the reason that it allows freer motion of the lungs. It is not so good if one takes late suppers. There are certain diseased conditions of the body in which lying upon the side is the best position. It may or may not be injurious to the ear to have the side of the head pressed down upon a pillow. If the pillow is a feather one it is most assuredly injurious, but if made of some good heat-conducting material, the injury, if any, is very slight indeed.

Horseback Riding.—"Will you, in the columns of your journal, give your views upon horseback riding? Do you think it is good for one who is troubled with determination of blood to the head, fits of dizziness, etc., or will you suggest what is good for such troubles?"

If the patient is strong enough to bear it, then horseback riding will prove beneficial. If not, it will be injurious. The same is true of walking and most other kinds of exercise. For difficulties of this kind exercise is the main dependence for effecting a cure, but it

must be of such a character as to be adapted to the strength and condition of the patient. For those who are not strong enough to take much active exercise, the Movement Cure is just the thing, giving them the right kind of exercise, and the right amount, without unduly fatiguing them. For persons who are able to walk two or three miles or more at a time, walking is better than riding. The walking should be done briskly, and not taken at a snail's pace. The diet should be plain and unstimulating, and all reading, study, and mental exertion should be indulged in very sparingly.

Over-Study.—"What is the best treatment for nervous irritation and debility induced by over-study?"

First of all, stop studying and let the brain rest. Secondly, call your muscles into action by such forms of out-door exercise as may be most practicable in your case, and are best suited to your strength and general condition. Exercise as much as you are able every day, but guard against over-doing, and increase the amount of exercise as your strength increases. Live upon a plain, unstimulating diet, drink nothing but water, and avoid all nervous excitement as much as possible. Mental rest, physical exercise, pure air, sunshine, bathing sufficient for cleanliness, and pure water, are your remedies.

Remedy for Cold Feet.—"Please send me a remedy for cold feet. My head is constantly unpleasantly warm. If you can do so it will oblige me, as I have tried the remedies prescribed by my physician, but all to no purpose."

If your feet are cold and your head hot, exercise your feet and legs and let your head rest, thus drawing the excess of blood from the head to the feet, relieving the head, warming the feet, and balancing the circulation. Walking, running, jumping, dancing, skating, or exercising the lower extremities in almost any way, will produce the desired result if the patient has the requisite vitality. Those who

are unable to restore the circulation in this way, should at once go to some institution where they can have the Movement Cure treatment applied, for an unbalanced circulation is liable to lead to dangerous congestions, inflammations, and diseases of various kinds.

Tomatoes as Food.—"I was taken all aback by Dio Lewis's opinion of tomatoes, as quoted by The New York Sun recently from his new book. If he is correct, I must empty all my tomato jars into the sewer forthwith. What say you?"

I regard tomatoes as one of the very best articles of food we have, and believe that if every man, woman, and child in this country ate them freely every day in the year, that there would be much less sickness and suffering than there is at present. I have eaten them very freely for many years past, and prescribed them for my patients, and always with good results. I have never yet seen any of the bad effects arising from their use ascribed to them by Dr. Lewis. Instead of telling you to empty your tomato jars into the sewer, I should say put up double the quantity for another year.

Impure Blood.—"A slight burn on my arm, after two weeks of the usual treatment, still looks like an angry sore. Is it not an evidence that my blood is in bad condition? I never before had any trouble with a burn, bruise, or cut; and if it does indicate poison in my blood, then, whatever may be the cause of it, is also chargeable with a like injury to my children, for one of them has had for ten days quite a stubborn sore on his finger, originating from an ordinary blow; and another has had an angry and troublesome irruption on his thigh; while my baby is distressingly chafed, in spite of the greatest care and a daily bath. This is an entirely new experience with them. We all bathe frequently, and try to maintain a tolerably hygienic diet. Gems, fruit, and vegetables are staples with us. Meat we use sparingly. If our blood has been poisoned by our mode of living, in any particular, I want to know it; and if possible, apply a remedy by a change of mode in that particular. My husband suggests APPLES as a solution of the problem as to the immediate cause. He has just been reading about "Apples and Salt Rheum," in the No-

vember number of your journal, which brought home with him this evening. Have all (including baby) been eating freely of apples for some time past. But the apples are bringing the poison to the face, HOW DID IT GET INTO THE SYSTEM?"

There is no question but your blood—that of your children is in an impure condition, but the cause is not so easy to tell. I say you TRY to live hygienically. You may and you may not, as you do not tell HOW you live. As far as you mention it is very good. Impure blood is often produced by eating much of even the best kinds of food, and consequent imperfect digestion and assimilation of the same. Especially is this apt to the case when but little out-door exercise is taken. Then again, the blood may become impure from not breathing enough, or from drinking impure water, etc., etc. Again, even if you live properly now, you probably have not always done so, and your blood and system generally may have been in a bad condition as a result, and you may also have transmitted the same to your children. Having recently adopted a more hygienic mode of living, your system may be rallying to the task of purifying the blood and establishing a better order of things generally. Try and find the cause, remove, if possible, persevere in your well-doing, and you and your children will come out all right.

Drugs and Fever.—"I have noticed that persons rallying from a fever treated either by Allopaths or Homeopaths, bloat generally, and especially in the bowels. What is the cause of it, and what is the remedy? Does this ever occur in water treatment of fever?"

The principal and usually the only cause of the drugs given in the treatment of the fever, and consequently it very seldom occurs in water treatment.

Indentation of the Forehead.

"If a permanent indentation is left on the forehead after a fall, does it indicate a fracture of the skull? My baby had a severe fall a couple of months ago, and was ill for a few nights after. A dent on the forehead remains."

It is not an indication, although both conditions may exist at the same time.

NOTICES OF NEW PUBLICATIONS.

HEREDITARY GENIUS: An Inquiry into its Laws and Consequences. By Francis Galton, F. R. S. New York: D. Appleton & Co.

It is not long since we published a critique upon "A Victorian's Problems," showing the periodicity of delinquencies, the power of imitation in spreading crime and fanatism, as also the propagation of moral disorder by means of hereditary sensuality and drunkenness. It was a dark side of human experience; the startling facts which go to show that the seeds of vice lodged in the human blood will produce their terrible harvest in generations yet to come—that no man or woman can hold fire in the hand and not be burned; not only themselves, but their after progeny, will inherit the burning stigma.

We have now before us a subject more hopeful, of an equally profound philosophy, and of a moral significance more so, as telling, upon a broader basis of observation. Human thought is at last tending in a direction more humanizing and robust than that of Malthus. We hail it as an omen of a better progress to a higher civilization.

In the work before us we see the veil, as it were, withdrawn aside, showing the slow progress of the ages, the retarding elements of the reign of cruelty and oppression which brought about crime, brutality, and human disorder in every shape, producing a race infinitely below the standard which Nature of a right was willing to enable to produce. No nation can present a high nationality without some care over the methods of propagation, the laws of which are as certain and as unmistakable as in the lower orders of creation. The farmer breeds from the best stock; the pedigree of a fine horse is carefully preserved, and he is allowed to propagate only from the best blood—best in moral horse-points as well as speed, shape, and endurance. A vicious animal, or a defective one in any way, is turned over to common labor, and not allowed to extend his kind.

How is it with the human race? Suppose the Greeks, a nation which produced a Socrates and a Phidias—types of humanity which no after age has been able to evolve—had been able to preserve themselves intact, and to go on developing continuously all that is beautiful in form, noble in ideas, and grand in art, the world would be infinitely advanced in civilization, in all wholesome modes of life, and we should have become a race founded upon a just and heroic basis—not as we are now, a race bestial, bestial, thieving, and cruel, with only here and there one in a million to show what we ought all to be in intellect, morals, and aspiration. But the morals of the Greeks were too licentious for men like Socrates and Plato to restrain, and, being few in number compared with the neighboring barbarians, they were soon overwhelmed by intermarriages therewith, and by war, luxury, and a general foreign influx. The Greek is ranged by our author, and we think justly, as two grades higher than the best Caucasian variety of the present day, while from extensive observation of the Negro, travels in Africa, and historic research, he finds the Negro is two grades lower than the white man of the present day.

We, all of us, even in our own limited circle, have seen families high in intellect, and true and noble in character, affording the promise of a superior race, suddenly

thrown back to an inferior type by its members marrying men and women of an altogether discordant, irresponsible and imbecile range of creation, thus not only neutralizing their own progress, but that of others, and what we see in families is, in the aggregate, what we see in nations.

The wars of the long, dreary ages have cultivated in men the brutal instincts, and they have come reeking from the battlefield to the household, there to entail their over-stimulated destructiveness in their offspring; more than this, war has destroyed the best physical and moral types, and left only the more inferior to propagate their kind.

We talk much of the benefit which the Roman Catholic Church has conferred upon the world in preserving the archives of learning, and making itself the depository of the more humanizing elements; but we forget in this the injury she has done by enfolded in cloisters and monasteries the gentle, loving, truthful, and intellectual, preventing the propagation of such by her enforced celibacy, and leaving, as wars have done, the inferior, animal masses to people the world.

Again, for centuries religious persecutions prevailed in the Church. We will cite only those of the Low Countries under Philip II., when more than eighty thousand are supposed to have perished by the stake, the ax, and the tortures of the Inquisition; remembering, also, the Massacre of St. Bartholomew contemporary in kind, in which more than sixty thousand were massacred in cold blood, and we see at once how not only the steadfast in character, but the great in mind, were cut off, and prevented from entailing their qualities upon the race.

In this we have spoken only of the thousands and tens of thousands who perished in a single era, and our readers have but to recall the facts of history to perceive the irreparable injury the race must have sustained, from the advent of Christianity down to the more tolerant ages; how the murderous, cruel, vindictive, artful qualities have been left to be engendered, while the nobler elements have been cut off. The poor in body, the low in morals, and the weak in mind have had it all their own way, and have filled the world with their miserable and unfortunate progeny.

We, in our inflated vanity, talk of modern progress as if it were a kind of boast, when it were well for us not to compare ourselves with each other, but with those specimens of the race who stand like solitary watch-towers lighting the abysses of darkness—Phidias, Socrates, Pericles, Aristotle, Bacon, Shakespeare, Milton—and how immeasurably short do we fall of such a standard!

Our author is not inclined to the opinion that superiority is entailed through the mother, but is disposed to trace it through the stronger masculine element. Divines, he admits, most frequently had pious mothers—that is, divines eminent for zeal and piety, which is a strong and important point gained, as indicating the sure transmission of high moral elements. It is often asserted that superior men like silly women, which is one of the popular errors, as every superior man enjoys the society best and the conversation best of women highly endowed, and it was the combined superiority of father and mother which produced a Bacon.

The statistics of our author are of exceeding value as showing how intellect runs in families; that where genius has once appeared it is most likely to appear again; that the intermarriage of gifted families is sure to continue the stock of gifted individuals; that the qualities which go to make up the statesman, the judge, the commander, the literary man and artist, are inheritable, and their reproduction by intermarriage a sure thing.

Beauty runs as an heirloom in some families, intellect in another, and the skill and power of the crack carman and wrestler is traceable through the blood of whole families. Such being the acknowledged facts of science, is it not time for intelligent men and women to think upon these things, and live in accordance therewith?

Our author justly repudiates the doctrines of Malthus, which, to avoid a surplus population, recommends that the more intelligent should abstain from marriage, thus leaving the imbecile and vicious, who are actuated by no wise considerations, to fill up the measure of increase.

He inclines to the Pangenesis of Darwin, which would seem to account for anomalous and exceptional cases. Thus a *gemmule* (germ) may have laid dormant through a hundred ancestors, a gemmule for good or for bad, when it may find in a generating pair the exact affinity for development, and suddenly the qualities of some remote progenitor are reproduced. This is a comfortable doctrine for families in which may break out some unexpected moral observation, which would seem to shift the responsibility back into some remote period; it also indicates that we are not so morally free as we like to suppose—no more than we are intellectually great, as modern vanity inculcates. But as the laws of propagation are clear and definable, it is to be hoped that in the course of time, by establishing wholesome affinities, these latent gemmules of an evil tendency may be so held dormant, and neutralised, that they will no more appear to vex and disturb the harmonies of creation, but that all the beastialities of

war and crime in every shape shall die out, and place to the reign of justice and truth, love and unity.

We must refer our readers to the work itself for reason of the infertility of certain families, and the sequent decay of the English peerages, and for also that genius is by no means unproductive.

SPRINGDALE STORIES. By Mrs. S. B. C. C. uela. Boston: Lee & Shepard, Publishers. York: Lee, Shepard, and Dillingham.

The series consists of six illustrated volumes—*A Nettie's Trial*, *Herbert*, *Ernie*, *Johnstone's Farm*, and *Wifellen*.

This is a well written series of stories adapted to little folks, and not uninteresting to the larger class. There is a vein of gentle piety pervading the pages, enough of the marvelous to rivet attention. Beginning with the sorrows of Adele, whose state of mind following her shipwreck and bereavement is described with a simplicity quite touching and natural; the six volumes continue to narrate the adventures of the family group, each volume in a manner complete in itself. We cheerfully commend them to our patrons.

WORKDAY CHRISTIAN; or, the Gospel in Trades. By Alexander Clark, author of "The Gospel in the Trees," etc.; with an Introductory Note by William Cullen Bryant. Philadelphia: Clark, Remsen, and Haffelfinger.

This is an earnest, quaintly written work that reminds one of the old days of John Bunyan, Richard Baxter and "Allen's Alarm," when men had a vital faith in what they wrote and spoke. If people can be brought to read it, good will ensue, morally and mentally. It abounds with historic incident borrowed from the Bible and shows how the true workman has helped on the true gospel of the world.

THE PUBLISHERS' DEPARTMENT.

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Errata.—On page 63, first column, twenty-seventh line from top, *nervous* should read *various*. Page 64, twenty-first line, for *Sardou* read *Sanzon*.

Notice to Our Correspondents.—

Following hints to correspondents should be observed writing to us:

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See List of Books elsewhere.

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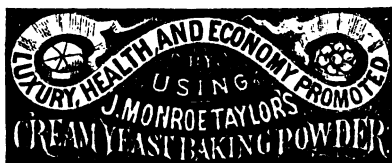
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SEE PAGE 95 FOR CLUBBING.

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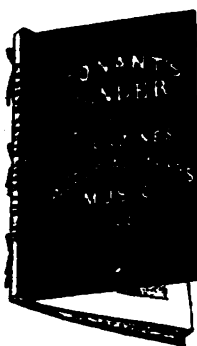
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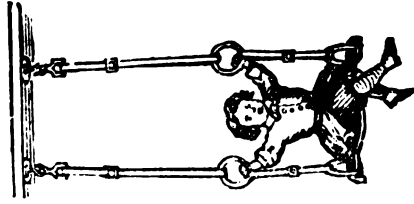
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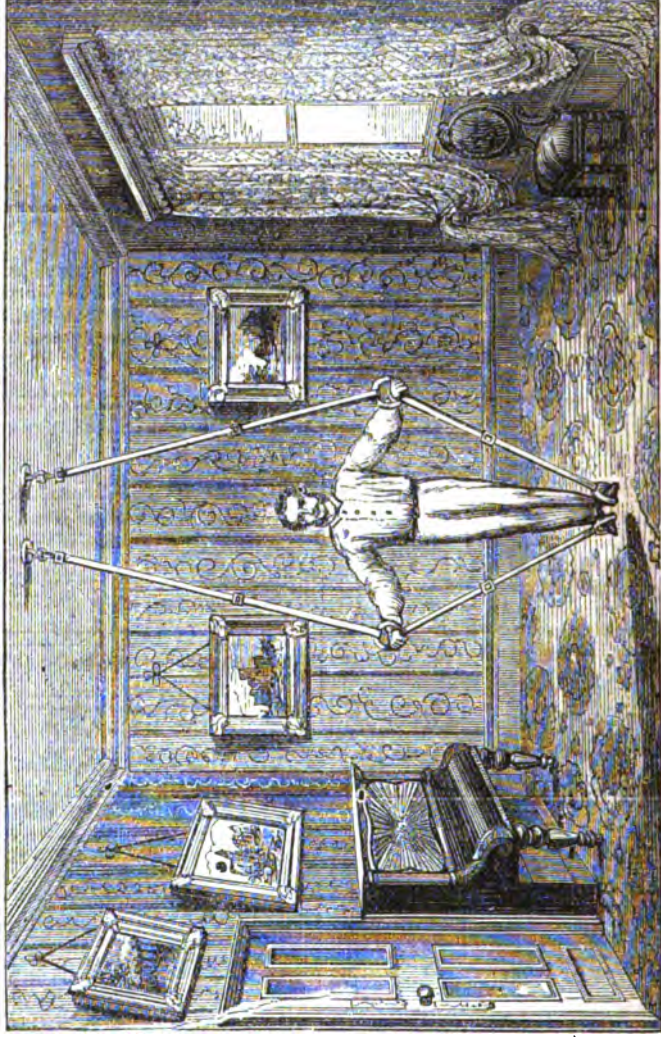
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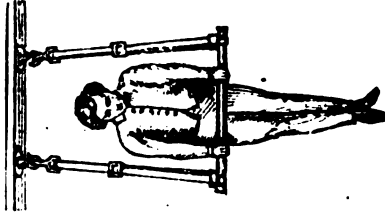


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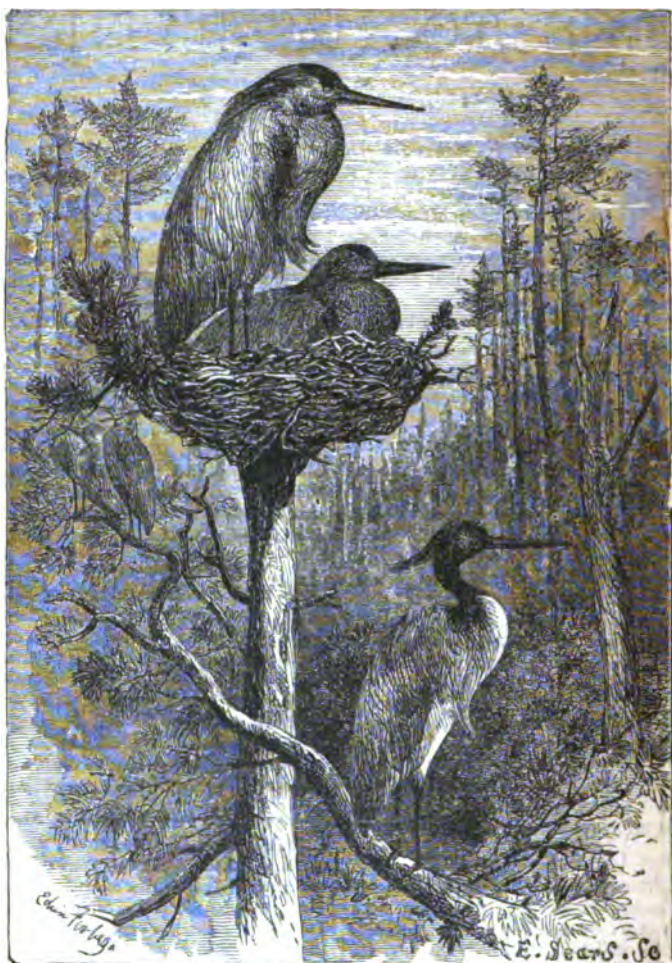
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CONTENTS FOR



GENERAL ARTICLES:

Temperance and Religion—Rev. J. Holbrook.....	97
The Education of Daughters—A Warning to Parents—Mrs. R. B. Gleason, M. D.....	100
Why Doctors Die Prematurely—Benjamin.....	102
Schoolhouses—Rev. Chas. H. Brigham.....	106
Theories Put in Practice, or Diary of a Physician's Wife—Mrs. H. C. Birdsall.....	110
Arguing—F. B. Perkins.....	113
Inherent Death—E. Ray Lankester, M. A.....	116
Lifting Exercise—Lewis G. James.....	119
The Two Sussex Lads (A Poem).....	121
Height and Weight.....	122
Studies in Hygiene.....	126
Recipes for Wholesome Cooking.....	128

EDITORIAL DEPARTMENT:

The Energy of Old Men.....	129
Railroad Horrors—A New Faculty Needed—Announcement.....	130

Expelled, etc., War of 1812.....	132
Blindness and Blindness.....	132
Why Doctors Die Prematurely—Benjamin.....	132
Rain Water.....	132
Drugged Liquor, etc.....	132

HOW TO TREAT THE SICK:

Healing Ulcers by Transplantation—	
In-growing Toe Nails.....	136
Cure for Rheumatism—Vaccination, etc.....	136
To Prevent Snoring—Cure of Stammering—Remedies for Poison by Ivy.....	137
FOOD FOR MIRTH AND THOUGHT.....	138

ANSWERS TO CORRESPONDENTS:

Torpidity of Liver and Constipation—	
Effect of Alcohol upon Longevity.....	140
About Fretting—Chapped Hands and Lips—Copper Cooking Utensils, etc.....	141

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THE HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE.

[Vol. 17, No. 3.]

NEW YORK, MARCH, 1871.

[New Series.]

PUBLISHED MONTHLY BY WOOD & HOLBROOK, 13 & 15 LAIGHT STREET.

A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

EMBRACED IN A SERIES OF TWELVE ESSAYS CONTRIBUTED BY OUR BEST THINKERS AND WRITERS.

No. V.—TEMPERANCE AND RELIGION.

BY REV. J. C. HOLBROOK, D. D.

THE bearings of the Temperance movement of our age are far more extensive and important than many persons suppose. There is hardly any interest of man that is not affected by it, whether temporal or spiritual. Its relations to health, both of body and mind, and to general prosperity have often been clearly set forth, but its connection with religion has not been so frequently and fully dwelt upon. In the brief paper I propose to present some thoughts on the latter topic.

Long and careful observation has served to convince most thoughtful religious men that the use of intoxicating drinks is one of the most serious hindrances to the progress of the Gospel in our land. In so far as it results in actual drunkenness, it shuts men out of the kingdom of Heaven. Religion and intemperance are utterly incompatible with each other. Where one exists the other can not, in the same individual.

Of all the vices to which men are addicted, there is none more degrading and dehumanizing than drunkenness. The Bible condemns it

as sternly as any in the whole category of immoralities. Drunkards are therein classed with thieves, idolators and adulterers, and it is expressly declared that they can not inherit the kingdom of God. Christians are warned not to keep company with them, no, "not so much as to eat."

In connection with the injunction of the Apostle Paul in Ephesians v: 18, to be "filled with the spirit," there is a caution not to be drunk with wine, showing that to be under the influence of alcohol is totally incompatible with being under divine influences. The pure spirit of God will not come into the soul, or dwell where this demon is. There is something offensive and abhorrent to Him in the condition of one who has yielded himself up to the appetite for strong drink, including wine.

In I Corinthians x: 21, the same Apostle calls the inebriating cup "the cup of devils," because the heathen in their worship poured out libations of wine to their false and abominable gods, and drank to their honor, under the impression that they were pleased with the intox-

icating draught, and he warns Christians against its use, declaring, "Ye can not drink of the cup of the Lord and the cup of devils." Not only is the use of alcoholic liquors to the extent of drunkenness offensive to God, but it is also to any degree. It shuts one out from all communion and fellowship with Him.

But besides this, such use is a barrier and hindrance to the operation of the gospel in the soul. Alcoholic liquors are used as a beverage for the sake of their effects on the brain, which is the seat of their influence. And all such influence is intoxication to a greater or less extent, proportioned to the amount taken into the system. As far as they affect the brain, they derange the mental faculties, deaden the moral sensibilities, inflame the baser passions, warp the reason and judgment, enfeeble the will, and so far unfit the man for all the great duties and responsibilities of life.

What is intoxication? It is poisoning with alcohol—whether in gin, rum, whisky, or wine. The word "intoxicate" is derived from Latin and Greek terms, used to designate the poison in which daggers and arrows were anciently dipped, in order to render their wounds fatal. When the poison of alcohol (and all leading chemists and toxicologists class alcohol among the poisons) is taken into the system it seizes upon the brain and, as already said, to the extent in which it is imbibed it disqualifies it for service. Truth can not then be properly weighed, duty estimated, or any great moral question clearly decided.

In this condition a man is no proper subject for the gospel, for if ever there is demanded a clear head and a free exercise of the mental powers, it is in the consideration of all the great truths of religion and the momentous questions connected with the eternal interests of the soul. Hence all experience proves that there is no class in the community which is so difficult to reach with the gospel, and to bring under its power, as those who are habitual drinkers, even to what is usually called a moderate extent.

And there seems to be among such persons an instinctive sense of the incongruity of the habit of drinking with a genuine religious experience, for there is often witnessed a most desperate struggle in their case, under religious awakening, between conscience and appetite, the one prompting to the abandonment of the cup, and the other pleading for continued indulgence, the result being conversion or non-conversion, according as one or the other triumphs; not unfrequently, too, when men are thus religiously awakened and desire to shake

off their impressions and resist the operations of the Holy Spirit through the truth, they are seen resorting to the intoxicating cup for that purpose, and usually with complete success. Facts in great numbers might be cited in corroboration of this. There is nothing more effective for "quenching the spirit," and deadening the moral and religious feelings of the soul than this.

Of all the instances, too, of backsliding and apostasy in our churches, a large majority are caused by the use of intoxicating drinks. Some years ago Rev. Dr. Lyman Beecher said of Rev. Dr. Nettleton, that he had "served God with more self-denial and consistency, and wisdom and success, than almost any man living; I regard him as one of the greatest benefactors God has given to this nation, and among the most efficient instruments of introducing the glory of the latter day." Dr. N. was extensively engaged in labors in revivals of religion, and was the means of the conversion of thousands. In a letter addressed to Dr. Beecher, which was published, Dr. N. said: "I have kept a list of those who have professed religion in the revivals in which I have participated, and have watched them with anxious solicitude and made particular inquiry about their spiritual welfare, at every opportunity presented. . . . *The sin of intemperance has caused more trouble, and none more dishonorable to the cause of Christ, than ANY OTHER VICE THAT CAN BE NAMED.* Few, if any, excommunications have taken place for any crime except intemperance.

"Now, my brother, what shall be done? do not ask what shall be done to reclaim those who have so grievously offended. *For these, fear, nothing ordinarily can be done.* Their case is almost hopeless. My inquiry is, What shall be done to prevent the future disgrace of the cause of Christ? The only evidence of repentance in such a case is a continued course of entire abstinence from intoxicating drink of every kind.

"From what I have seen I do believe that no class of persons are more likely to be deceived with false hopes than are such as have been in the habit of drinking freely, though not to intoxication. *If, while under conviction, a person allows himself to sip a little to raise his sinking spirits, he is sure to grieve away the Spirit of God.* I could fill sheets with the relation of facts.

"I think we may set it down as a probable sign of a false conversion if the individual allows himself to take a single drop. Every time he tastes he is putting fire to tinder and powder."

We are taught to pray, "Keep back thy servant from *presumptuous* sins." And who sins presumptuously if he does not, whether in the Church or out of it, who in this day, and amid the light that shines upon the danger of the use of alcoholic beverages to any extent, allows himself to indulge in the practice?

But our subject is not exhausted when we have shown how antagonistic is the use of intoxicating drinks to the work of God and the direct operations of the gospel in the soul; we must also consider the influence of drinking-habits on the general morals of the community. They are often, if not almost always, associated with and promotive of gambling, Sabbath-breaking, and other immoralities that are opposed to religion and hinder its progress and disincite men to the means of grace. What an immense flood of crimes and evils flows from this source, which obstruct the progress of religion! Sweep away all the hindrances that have their origin in drinking-habits, and create an entirely temperate community, and how comparatively easy would be the work of building up churches and establishing and maintaining religious institutions, and bringing the masses under the influence of the gospel.

What a monstrous perversion and waste, also of the pecuniary resources of society, is involved in the use of intoxicating drinks which, if devoted to religious purposes and enterprises would speedily give the gospel to every creature. What could not be accomplished in the way of building churches, supporting ministers, and sending out missionaries, if the sum total of what is spent for alcoholic liquors in the United States were devoted to that purpose? Give me this, and I will sustain every existing missionary, Bible, and tract society among us, supply every settlement in our land with a church edifice and a preacher of the gospel, and have a handsome surplus left to multiply instrumentalities for the spread of the gospel, and the intellectual and moral elevation of mankind. Men talk of being taxed to maintain religious institutions; why, vastly more is wasted in intoxicating drinks in this country, annually, than all our religious and educational expenses.

Take what view we will, then, of the effects of the use of intoxicating drinks on religion, we see that they are evil, and only evil continually; there is not an iota of counterbalancing good. Hence we see the justice of the remark of the writer of the first number of this series of articles on Temperance Problems, that "the great body of those who stand for the cause of

Temperance are the enlightened, cultivated, conscientious; and the great body of those who stand against that cause are the unenlightened, the uncultured, the careless." It is just what we ought to expect.

It is noteworthy that the great mass of the ministers in this country, as well as of the members of our Protestant churches, are the open advocates of the Temperance cause, and practice upon its principles. This fact speaks volumes in respect to the importance and value of this great reform, and affords presumptive evidence that it is intimately connected with the religious prosperity of society. And the more we study the subject philosophically, and in the light of observation, the more we shall see the propriety of the designation given to Temperance of "the handmaid of religion." It has been frequently noticed that a powerful Temperance reformation in a community has proved to be the John the Baptist of a wide-spread revival of religion.

When we think how extensive is the use of intoxicating drinks, and what a mighty obstacle it is to the moral and religious as well as the intellectual and physical elevation of society, is it strange that those who are most in earnest in the work of this world's renovation and the salvation of men, are also ardent friends of the Temperance cause? Would it not be stranger if they were not? That any Christian, not to say philanthropist, can be indifferent to the advancement of this cause, and fail to array himself in the ranks of its friends, is among the strange inconsistencies that we so often see. Whether or not we can say that the triumph of the principles of the Temperance Reform will be the triumph of Religion, it is certain that Religion can never prevail until the use of intoxicating liquors is banished from society.

DRAWBACKS TO HEALTH OF TEACHERS.—

With the vile atmosphere of the schoolroom constantly pouring over the lining membranes of the nasal cavities, surging about the linings of the throat and the vocal organs, diving down the bronchial tubes, and deluging the lungs, what wonder the teacher first suffers from vitiated blood, then from clogged membranes, and, lastly, from catarrh, bronchitis, dyspepsia, and, perhaps, pulmonary consumption. It is next to impossible, that the more nervous and susceptible constitutions should not sooner or later succumb to the baneful influence of so complete and omnipresent a cause of physical depravation.—*Schoolmaster.*

The Education of Daughters.—A Word to Parents.

BY MRS. R. B. OLHASON, M. D.

WITHIN the last quarter of a century our land has been dotted with seminaries and colleges for the education of our daughters, and now come the questions which the friends of the cause must face.

Is the plan of study usually pursued the one best suited to the prospective wants of the pupil? Is it advisable for a growing girl, with a delicate organization, to undertake the full college course, and add also the ornamental branches?

As I had long looked with ardent longing for an enlarged course of study for young ladies, I am watching with intense interest its results. Meeting with so many chronic invalids among those who have had the best educational advantages, I have grown anxious on the "school question," and visited many of our best institutions to ascertain whether homes or schools were at fault, that we have so many invalid daughters. I am very sorry to find that hosts of sick girls are sent to our best schools, expecting that they will learn the art of healthy living along with the other arts and sciences. Parents expect good scholars to be made out of very poor material, and that, too, in an incredibly short time. I am surprised at the home-pressure on delicate girls, urging them to do double duty that they may enter an advanced class, and thus graduate early, when the young lady is better fitted for an infirmary than an institution of learning. An absent daughter is a great social privation to parents, sometimes also a pecuniary tax which they can ill afford; hence the propensity to "hurry up," which is so hazardous to mind and body.

Uneducated parents are often over-earnest for the education of their daughters. They have no conception of a college course, of the amount of mental labor it requires, or that delicate girls unable to work are unable to think consecutively, or profitably, for any length of time. Such remind one of the ignorant woman who called to inquire how her boy was coming on at school. Being told "not very well," she asked "why?" "He lacks capacity," replied the teacher. "Indade, sir, and why didn't ye tell me that afore, and I would have bought him one!"

"Money can't make me well and strong like

other children," said little Paul to Dombey, his father. So, schools well endowed and well kept can not give good health and great scholarship to sickly girls in a short time, even though rich parents are ready to meet the bill, and the best of professors are untiring in their efforts. Hence, let us cease complaining of our schools when we send girls young and sickly, and they come home less in mind and less in muscle than we expected.

The first great fault in their training is the insane haste to have them learn every thing while young. By this means, their education is literally finished early—the intellectual force and flash being burned out, used up hopelessly. Of those thus crowded many die early, some are left permanent invalids, and others still retain their physical power but fail mentally. The bright scholars become not only dull as years advance, but sometimes positively imbecile, or as we say, weak-minded. Of all these classes I have seen many very sad instances.

The peculiar phases of mental and physical derangement induced by over-study while young are presented more at length in "Talks to My Patients," and hence I will not now dwell upon them. Suffice it to say, our girls are not mature enough in mind or body to endure the labor of a college course till they are eighteen or twenty years of age. Remember, that I do not say that they can not learn the appointed lesson, or that they may not graduate with honor even before that age, but it will be at the expense of mind or body, which will show itself in after years. Their womanhood will not be as strong, as complete, as enduring as it would have been if they had had less study in early girlhood. Not only is their health almost invariably impaired, but what they learn while thus over-crowded is evanescent. Many a young woman, during the days of invalidism when she succeeds her school course says, "I'm forgetting all that I learned."

During school examination young ladies will recite so much and so well as to amaze men of sound learning who listen, but the pale lip and wasted muscles, which give now and then an involuntary twitch, show that the system has been over-taxed, and graduation closes usually the career in science and literature. The brain

too weary for close, substantial reading, back too weak for piano practice, no taste nor strength for domestic work; so she takes to easy chairs, light literature, social life, and worsted work, unless in lack of friends to give support she is driven to the school-room to earn a living, which is "a hard road to travel" for a worn-out student. The objection comes, that if our daughters are not sent away to school early marriage will interfere with their proper education. Be it so, they had much better enter upon their new life with good health, and good home-training, *without* the college course than with it, and lacking the first two acquirements. It is impossible for girls to graduate at eighteen or twenty, have the freedom necessary for a good physical development, learn well home duties, and take a complete college course, to which has been added art studies. Something must be neglected, and it is usually health and housekeeping, the two most important elements to make a contented wife and happy home. Every thing in its order—first the physical, and those activities which favor muscular development. There is a time for all things, and the time to develop muscle and learn those forms of handicraft which depend on them is before the twentieth year. After that it is developed slowly and imperfectly. All deem important the early muscular education of the fingers for the piano, even so the tact, dispatch, and strength of fiber needed for domestic work should be developed when the body is growing. If delayed, dislike and debility make it irksome. If the first lessons in household work are postponed until after graduation, we shall conclude that our girls have learned "all kinds of sense except common sense," and that, however well their heads are furnished, their hands are very useless and their backs too weak for any useful work. I do not mean that much manual labor and close mental work can go on simultaneously. We should not expect our girls to be able to do much at home while in school. Therefore, during their growing stage there should be school life and home life, alternating from year to year, as the state of health and state of head indicates. But the girls say, "Let me finish my school course, then I will learn housework," and add by way of argument, that it will be easier to learn now than later, that they can pass a better examination by continuous study, all of which is, to some extent, true. But nothing pays which impairs health in the acquiring. This turning all the life force to mental culture unbalances a system which has a body and brain. Hence grow-

ing years should be divided between the development of the one and the other.

There is reason to hope that if our educational plan included more years, it would delay marriage till the mental and physical maturity of womanhood was more perfectly accomplished, and thus bless the land with better wives and better mothers. If the young lady completes the full college course, and also music and painting, and has given good attention to home culture, and taken good care of her health, she should feel that she has done well if she receives her diploma at twenty-two to twenty-four years of age, according to her health, early advantages, and power of endurance. Very few can do all this, and do it well, before that age.

But some one says, "Our sons go to college young, and get through earlier than this." Yes, and how do they come out? Many of them miserable invalids, others know little more that is good and much more that is bad than when they entered. They often lose for lack of good home care what is of more value than all the Presidents and Professors can give. But I am not writing of the sons, but merely wish to shut off invidious comparison between the sexes. Both need constant guidance during their most impressible ages. Boys in some respects require more and receive less than girls. Our sons suffer more from vicious habits, and our daughters from those that are unhealthful. Boys are trusted more at large, but the community calls for continued supervision of our girls, and hence the confinement must be close, too close for the best development of the young, who ought to enjoy childish freedom, like lambs at liberty to run in the home pasture under a shepherd's eye, where they can be gathered into the family fold about "nightfall." The general regulations for college students as to hours of rising, retiring, and exercise can not be elastic enough to meet the needs of sensitive, sickly, delicate girls. The effort made to adjust the rules and the exceptions in a large school so as to meet the wants of the younger and weaker members makes the work of supervision, of giving permissions, very burdensome for those who have the oversight. Teachers are worn in the effort to do double duty, that of acting as teacher and mother to many who ought still to be in the home nest.

"But," says one, "if my daughter is at home she will go out in society too early, she will keep late hours, and eat what she ought not to, and if I put her in school she will be restrained and held to regular habits." And so you shirk the care and responsibility of guiding your ex-

citable and wayward child on to some worn-out teacher, who has already more of that class than she can well manage.

Another says, "If my girl stays at home, what shall she do? I don't want her on the street, and we keep so many servants there is nothing for her to do in-doors." All I can say to this is, that every girl should do domestic work till she can do it well, and that her mother should teach her the art of housekeeping.

In all our larger schools are gathered many young girls who are not ready for the position, but for whom there seems no better place—motherless girls, those unhappy with their second mother, and those whom their own mother can not manage. Of the many belonging to these classes, I have seen many sick, sad faces among girls fourteen or fifteen years of age, who had been in a boarding-school for three or four years, and who counted the years they must remain before they could graduate as convicts number the years of imprisonment. They had no love for study, no health for study, and were weary with the monotony of their lives. There is no drudgery so irksome as mental work, when there is lack of taste and strength to accomplish it well. Those who take kindly to boarding-school life at an early age, lose their love for quiet home life, and seldom regain it. Those who can not have proper home care at this age should find a place in small family schools, where there can be as much of home freedom and home-feeling as possible. To be sure, there are educational advantages in a large school which can not be had in a small one, but this will not make amends for the nervous excitability and consequent exhaustion induced by the presence of so many persons. Besides this, the individual motherly supervision, the quiet home sense, is lost. As to those wild and wayward girls who worry teachers, and lead pupils astray, and necessitate rules and regulations too stringent for the general good, they need a place of their own.

A President of one of our colleges said, half playfully but very wisely, that the Protestant churches needed what was equivalent to a Catholic convent for this class, or a sort of "House of Refuge," for girls who would not do well at home, and who were ringleaders of mischief at college. Certain I am that the system of espionage often practised in our large schools has an unpleasant effect on the watcher and the watched.

If parents felt more their personal responsibility, and would keep their children under good home guidance till they were well established

in health, mature in mind, and needed the aid of presidents and professors, our high schools could then do their appropriate work, and not have their enthusiasm exhausted in nursing, watching, and governing. I have been annoyed, amazed, and amused at the variety of work parents require of their teachers. As a sample, a city mother takes her daughter to college and amid the varied attentions which she wants her to receive, asks that the lady principal will try to have her daughter converted, and see that she curls her hair every morning, adding that her father is very particular about her hair, as he likes to see her in curls, and that she (the mother) feels very sorry that Clara is not a Christian. The desire for outward and inward adorning was all expressed at the same time, and in the same tone.

Let parents look well after the spiritual and physical training of their children, and accept such helps for the mental as their location affords, until the general habits are well established, and then we have a foundation and superstructure to which colleges can add gifts and graces.

THAT ONE DROP.—For two years past I have been laboring to save an inebriate. After several relapses he became perfectly sober and gave hope of permanent reform. His wife remarked, "If he falls again, it will kill me." Things went on smoothly several months. That once darkened home had become once more a sunny spot. But one day the reformed man met an old friend, who invited him to dinner. At the table wine was furnished, and the entertainer pressed the reformed inebriate to take a glass with him. He knew the man's former habits. The unhappy man swallowed one glass, and it unchained the demon in a moment. From that hour to this my poor friend has hardly seen a sober day, and nothing but a miracle of God's grace will ever lift him from the bottomless pit into which one treacherous glass of champagne hurled him in an instant. In this case it is not difficult to decide who was the greatest sinner. The man who urges a reformed inebriate to touch a drop of intoxicating liquors deserves to be imprisoned for ten years at hard labor. He is not a safe person to run at large, for where is the moral difference of assassination with a knife, and assassination with a "social glass" of poison?—*Dr. Cuyler.*

THE man who possesses good health is always rich.

Why Doctors Die Prematurely.

BY J. HENRY BENNET, M. D.

THE following paper, by Dr. Bennet of the Royal Free Hospital, London, from The Lancet, though specially referring to medical men, contains practical hints for all hard workers in advanced years. Men ought to work well when young and in their prime, and after forty-five or fifty years of age take active life more leisurely, cultivate the higher and better faculties, and live so as to prolong life to a good and wholesome old age.—Ed. H. or H.]

It is admitted by all statisticians that medical men are a short-lived race—indeed, that the standard of mortality in their case is that of unhealthy trades. Why should it be so? As a rule, medical men are well-fed, well-clothed, well-housed members of the community; and the occasional risk incurred in ministering to contagious diseases scarcely accounts for the shortness of their lives, for their premature age, sickness, and death.

Such thoughts have often crossed my mind of late years. When a man has passed his fiftieth year, his contemporaries and companions begin to drop off around him in great numbers, in every class of life; but in our profession the mortality is evidently greater than in other professions. This mortality is also evidently greatest among its most intelligent and most eminent members—a fact which appears to me to contain within itself the key to the question I have put. May it not be that such men succumb and disappear from our ranks *because* they have been great workers, and consequently successful in their generation?

If it is so, if the most valuable lives in our profession are constantly brought to a premature close through the overstraining of vital powers which success brings, would it not be well if the positive danger to life of great success, were more generally enforced and recognized? Our lectures and class-books teem with warnings respecting the dangers of sloth, of inactivity, of mental stagnation. May not a few words of warning be added on the dangers of work and success? If so, they will not come inappropriately from one who failed physically, years ago, through overstraining of mind and body—from one whose recovery has been principally due to his having seen the error of his ways, before it was too late, and to his having

accepted and followed the laws of Physiology and Hygiene, formerly ignored, as they are nearly always ignored by the whole tribe of mind and body workers.

The peculiar feature of the medical profession is, on the one hand, that work increases with age, and, on the other, that the public do not consent to look upon aging medical men as veterans, but exact from them to the end the labor of youth. In all other professions, as age advances and renown and prosperity increase, assistance, relief, come naturally. The barrister has his junior counsel who prepare his briefs, the solicitor his head clerks, the vicar his curates, the colonel his staff of officers, the merchant or banker his junior partners and clerks; but the successful physician or surgeon must stand all alone, whatever his age, and do his work entirely himself as long as he practises. Thus, after the age of forty and fifty, the hours of positive work increase very rapidly, instead of diminishing. An officer of fifty or sixty years of age, after seeing thirty or forty years' service, is considered to have gained a claim to repose for the rest of his days. Even a missionary, after less than thirty years' labor in the cause of religion, is pensioned off, and thought to be entitled to honorable rest for the remainder of his life. But a medical man of fifty or sixty, after thirty or forty years' labor in the cause of health and life, is still called on by public opinion to work like a young man. If he does not rush night and day, not only to assuage real disease, but at the voice of vain fears and caprice, if he transfers night-work, and gratuitous or ill-paid attendances into the hands of his juniors, he is considered hard-hearted, mercenary, devoid of Christian and Samaritan feeling; in a word, public opinion makes it difficult for him to withdraw into the "Aroopagus" of science, to become a deliberative and not a militant member of the profession. Nor is the public altogether to be blamed, because it is only by raising his fees that the medical practitioner can erect the barrier which is to defend him from the burden of work he is no longer able to bear. Thus, to many of the thoughtless it appears as if he merely wished to get a larger remuneration for his services, although his real wish is merely to eliminate, to keep at bay, many of those who would wish to employ him

The only means at his disposal to diminish work brings on him an odium he too often has not the courage to incur; so he works on, old and feeble, responding to every call, until at last death closes the scene, prematurely.

Between forty and fifty, a man of average constitution is quite equal to success and to the hard labor that it entails in any branch of the profession, to work by day and by night, to care and responsibility; although the weak ones succumb, as did Dr. Todd, Dr. Briston, and many others I could name. But when fifty is reached and passed, the human economy begins to decline. The hair becomes gray, the sight fails, the gums abandon the teeth, adeps is deposited in unwelcome regions, and many other signs of nutritive deterioration show themselves. No doubt nutritive power is diminished in the entire economy, and the tendency to morbid nutritive conditions steadily increases.

This is just the time when the labors of the successful practitioner increase to the greatest possible extent; and as the brain is the last to give way in the intellectual man, he works on under mental and nervous pressure. By sixty, or thereabouts, the climax is often reached. The overstrained organization ceases to respond to the mental stimulus, and death ensues through some form of nutritive aberration, which has been slowly but surely progressing. Such was the case with our recently mourned brethren, Simpson and Nunneley, the one fifty-eight, the other sixty-one.

Can this sad expenditure of life among the worthiest of our profession be arrested, be avoided? I think myself that it might, if we would cease to live as if we were immortal, as if the diseases we saw daily did not pertain to us; if we would listen to the teachings of physiology, and discard the miserable vanity of thinking that we are exceptions to the general rule, and that at fifty or sixty we are as young and strong as at thirty or forty. To accept this lesson, however, we must analyse ourselves, and if we find ourselves wanting in vital power, thrust aside the scarlet cloak of nerve stimulants—alcohol, coffee, tea, by means of which, I believe, it is that efforts inconsistent with real vital and nutritive power are made by workers in general, and by medical men among the number.

A man who meets age or debility, or want of constitutional power by alcoholic stimulants, even in moderation, by coffee and tea, conceals his real nutritive condition from himself. When both the nervous and muscular systems are exhausted, and want repairing by legitimate nu-

trition—by beef, mutton, bread, and rest, a man may galvanize his economy by nerve stimulants so as to be equal to nearly any thing up to the last. But the process is a destructive one, exhausts vital power, impairs healthy nutrition, and lays the foundation for morbid organic changes.

By alcoholic stimulants, constantly repeated whenever exhaustion supervenes, the power of work may be supported until within a few days or hours of death, as we constantly see in the lower classes of life. Tea and coffee have nearly as great an apparent nerve-stimulating, strength-supporting power. Let any one who doubts it take a cup of strong tea or coffee when exhausted from want of food and from physical fatigue. The craving for nutritive elements to repair waste, and the sense of fatigue, both disappear in ten minutes, and a couple of hours' more abstinence and work are easily borne. But what have we done? The physical organization wanted repair, wanted the elements of nutrition, the nervous system rest, and we do worse than give them a stone, for we flog them, we galvanize them into continued action.

Night-work is principally done on such stimulation. The student, the writer, young or old, who retires to his study in the evening to work, does so on tea or coffee. The tired brain wants sleep; it is galvanised into intellectual labor. Is it surprising that morbid organic conditions should occur in the long run?—for we must recollect that the nervous system rules over all organic and nutritive changes, normal and abnormal.

Every June a *conversations* takes place at the College of Physicians, which is usually attended by most of the medical and surgical celebrities of the day. This meeting gives an admirable opportunity, year after year, for watching the ravages of time and work. The young physicians and surgeons, as also those who have acquired reputation but as yet little practice, are more or less pink and rosy; their nutrition is mostly good. But it is far different with the heads of the profession, with the men above fifty, on whose shoulders rests the weight of London consulting practice, and who are making large, often very large incomes; they are mostly pale, or sallow, or anemic. As I walk among them I feel like Cassandra at the siege of Troy, and mentally prophesy evil—fatty hearts, atheromatous deposits in the arteries, degeneration of tissue, as the probable result of lives passed in contempt of the laws of hygiene and physiology.

What, then, is to be done to avoid the evils of

overwork in advancing age? Many of our brethren can not help themselves. They are like soldiers in battle: the *res augustinus domi* offer an insuperable impediment. They can not rest; they must go on. But many, on the other hand, could increase their chances of life, if they would by despising riches, by throwing their less remunerative practice into the hands of their juniors, by giving up public appointments, by limiting their labors to what their real, undigressed, unassisted mental powers would enable them to do; and, finally, by retiring from the field of action before life has been used up by work to the last drop. What if they do retire on a pittance compared to previous gains? Does not the colonel, the admiral, retire on half-pay, and contently live to extreme old age as the reward?

What applies to our medical brethren applies

to all; and it is our duty to lay, nakedly and sternly, these facts before erring patients.* Is it not very evident that we have recently lost our most distinguished literary man, Charles Dickens, at the early age of fifty-eight, from continued overstraining of the nervous system?—in his case altogether without cause or excuse. On his return from America, he wrote that his readings during his tour in the States had much wearied and injured him. The constant traveling, the excitement of the meetings, the dinners, the receptions, had been too much for him. Had he then been made to understand that he was working against age and impaired vital power—risking his life, in a word—he might have taken rest, and been with us now. But he continued the same labors, the same excitement, and died from brain disease, regretted by a nation, prematurely.

Schoolhouses.

BY REV. CHARLES M. BRIGHAM.

THE change from schoolhouses of the old style to schoolhouses of the new style has come almost within a single generation. The old district schoolhouse is now as much a relic as the spinning-wheel and the "tin kitchen," and a score of other implements which were necessities of life in the homes of our grandfathers. A few specimens remain at the corners of the cross-roads, and a few towns which civilization has left aside in its march, hold to the old pattern in their school architecture; but in almost every place, city or village, in the East or the West, the new "temple of science" has other form and proportion than the small, bare room, which was once quite sufficient. It is not perfectly demonstrated that, in all particulars, the new schoolhouse has improved the old schoolhouse. The old schoolhouse was usually ugly, but its ugliness was on a small scale, and not the gaunt, staring, grotesque ugliness of so many of the new brick monstrosities. It was not uglier, either than the houses of the village or the farms around it, and matched these fairly in shape and color. The old schoolhouse had loose joints, cracks in the window-sills, holes in the floors, leaks in the roof, and often a smoky chimney. But this very looseness of structure allowed free ventilation, and the pupils were not confined in a poisonous atmo-

sphere. The old schoolhouse had a narrow area within, and no spare room for elbows, but it had with this ample play-room without, on the hillside and in the pasture. If the benches and seats were hard and unpainted, they gave more license to experiments in wood carving, and joined art to mischief. The "District School as it was" had genuine merits, and some characteristics which we can not afford to lose. It had no carbonic oxide to breathe, no high stairs to climb, no water-pipes to freeze and burst, no echoes to try the voice and ear, and "no danger in case of fire." It was easy to get in to, easy to get out of, and quite as easy, on the whole, to sit in for three or six hours, as the schoolhouse "with all the modern improvements."

The modern schoolhouse, doubtless, has many "improvements." It is more imposing in appearance, and more consistent with the dignity of its office. The old schoolhouse always gave the lie to the swelling phrases in which education was exalted as the chief of human interests. It would seem that if education is as important, as momentous, as high and noble, as are traffic and religion, the symbol of education, the schoolhouse, ought to illustrate that nobility and be as big as the warehouse or as the "meeting-house." They could not make the

teacher an equal of the tradesman or the parson, while he had to ply his work in a room of fifteen feet square, instead of a two-story store, or a long hall with galleries and a steeple. The modern schoolhouse vindicates in its bulk and volume, and tiers of windows, and probably its cupola above all, commanding a view of all the roofs, of house and store and church together—vindicates in this the honor of its function; it has a right to the metaphors of royalty. An ordinary teacher can take comfort and respect himself more in his calling when every one has to look up to him in his place of labour. A schoolhouse which is as large as a church or a factory will naturally in the minds of men and women be classed with the church and factory, as a chief public possession, and will magnify the office which it holds. Big schoolhouses have been both cause and effect in the improvement of the profession of teaching. They have grown from the grand words which have been poured out in public addresses, and they have opened fresh supplies of this flowing rhetoric. In the old schoolhouses the teachers could never come together, there was no room for them, and they could only feel the disgrace of their calling. But in the great halls of the new schoolhouses the teachers can take courage, as they congratulate one another, and see in what pleasant places their lines have fallen. The modern schoolhouse has made education a "cause," and teaching a "profession."

But in its details of convenience the modern schoolhouse excels especially the ancient structure. It has rooms of various sizes for study and for recitation, and ante-rooms and closets in addition. It has blackboards upon the walls, to illustrate all the branches taught, from the simplest orthography to the mysteries of the calculus. It has patent desks and patent seats, combining lightness and strength, and glossy in their shining. It has registers in the walls and in the floors, to carry off the noxious gases, and others to let in heat from subterranean fires. There is a clock above the teacher's desk, to mark the hours and beguile the weariness of tired students. There are maps of all kinds and sizes, outline maps, maps of towns and counties and States and hemispheres and of the globe, maps of physical and of civil geography, maps terrestrial and maps celestial. In one room there is a library, stocked with books of reference and of useful knowledge. In another room there is a cabinet of natural history, fragments of stones, pressed leaves and flowers, impaled bugs and butterflies, a few stuffed birds and rodents, and possibly fossils of extinct

species; or a cabinet of materials and instruments to prove by example the doctrines of chemistry and physics. Photographs and engravings at intervals pleasantly join art to science in the school-room, and even busts are permitted upon their brackets. A piano or cabinet organ directs the music, and there are seats of honor for guests who may come. The better class of modern schoolhouses provide not only for the ordinary needs, but even for the caprices, of teachers and pupils. Comparatively few of the homes are better supplied. There is hardly any thing to suggest the pursuit of knowledge under difficulties, so constantly taught in this aspect, atmosphere, and appliances of the old district school.

Yet with all this multiplication of conveniences and contrivances, the new schoolhouse fails to satisfy those who would train the body along with the mind, and care for the health and safety of the children and youths who are gathered in these great educational nurseries. The long staircases of the three-story and four-story schoolhouses are not beautiful to one who considers the risk of fire and the danger of panic. The clean varnished patent desks and chairs only hold their occupants in constrained attitudes, and hinder freedom. The air that comes up from the cellar often comes loaded with the impurity which cast-iron and fossil coal have given it, and takes in the crowded rooms additional impurity. The dust is not so readily purged away as in the old schoolhouse, and it lies on the edge of blackboards, on desks and sills, on cornices, and floats in the sunbeams which glance in through the tall windows—dust of many kinds, too, of chalk and of cloth, as well as the dust of the highway. When the great schoolhouse is in the streets of an industrious city, where children most crowd its rooms, its very height exposes it more to the smoke from the factories, and the grime of soot is added to the common dust. For this schoolhouse, too, the rattle of carts upon the pavement, so jarring to the nerves, is the substitute for the hum of insects, which used to lull the urochins of the ancient school in the warm summer days. In most cases, moreover, the inner convenience of the new school building is gained at the expense of the outer play-ground, and those who have such nice seats to sit in, shaped to the frame, have no room to run in when they are released. The old schoolhouse, at any rate, could never be mistaken for a prison, which the new might often be, in the silent order of its discipline, so well adapted to its massive proportions, and its hard granite walls.

The new schoolhouses, on the whole, are an improvement upon the old, and we should not wish to restore anywhere in city or country the style of the old cross-road building, with its gable windows, its hard seats, its narrow area, and its lack of conveniences. The progress which has been made under the leading of Horace Mann and his followers is real progress. But there is room for improvement yet, and schoolhouses are by no means what they ought to be. The new buildings—grand, stately, palatial, as they are, with all their fixtures, and all their display, do not “realize the ideal,” or satisfy the physiologists. There is danger in the spine in those shining seats with their cast-iron frames. And especially in the infant school is the confinement in those small arm-chairs a doubtful gain from the freedom of the ancient benches, on which the infants could tumble and roll, in defiance of rules. The new schoolhouses do not at all fit to the *kindergarten* idea, which, as we said in the last essay of this series, is the idea which is growing in favour. They have not expurgated from schoolhouses the feeling of a place of penance, from which escape is a hope and a joy. The model schoolhouse will get rid wholly of this penitentiary taint, and be no more a trial to patience than the home in which the family live. That phrase which is coming into use and which adventurers in education are swift to adopt, of a *family school*, suggests the type of building of the schoolhouse of the future. The question of this ideal building will determine in large measure the question of the duty and work of the “coming woman” and the “coming man,” now so much debated. “Will the coming boy and the coming girl go to school in such houses as those that stand now so proudly in the streets and on the hills?”

What are the “indispensable requisites,” if we may use such tautology, of a good, commodious, and healthy schoolhouse, which shall not only be up with the times, but shall be right from the sanitary “standpoint?”—(we must beg pardon of Mr. Richard Grant White for using that convenient German word).

1. In the first place, such a schoolhouse will have *plenty of room around it*, will stand upon a lot that is large enough to give ample room for the sport of children in their half hour or quarter hour of freedom. Its area will not be bounded by a few square feet around the tall walls, with a high fence of board or iron to mark the inexorable limit. The more scholars it contains, the more space for play is needed around the building. This rule of size is practically inverted, and is made in many cases to

read, “the larger the building, the smaller its play-ground.” A schoolhouse that holds twenty children gives them “all out-doors” to run in; they may take to the road or leap the low fences, or chase squirrels in the wood. Their play-ground stretches as far as they can hear the sound of the bell which calls them back. A schoolhouse that holds a thousand children, on the contrary, must turn them out in sections into pens as narrow as the cattle-pens by the stations of the Western railways. The “recess” of one of these great city schools is a melancholy sight to one who has been accustomed to the free sport of children around the country schoolhouse. A fair calculation would allow at least as the play-ground to a child as many feet as a man ought to have in his work. For a school of a hundred pupils half an acre is little enough, and when the number of pupils is doubled or trebled or quadrupled, the full acre is not an extravagant allowance. Four or five acres would be better still. A small schoolhouse in a large ground pleases the eye much more truly than a ponderous building that nearly fills the lot on which it stands.

It may be said that in the larger cities so much space can not be spared for school purposes, and that a lot of an acre or half an acre in size would cost a sum altogether beyond the means of the tax-payers. Where land is sold by the square foot it is idle to talk about *acres* for school purposes. To this argument we have no answer except to say, that the amount squandered annually in the larger cities upon useless officers, and foolish junketings, and unlawful appropriations, would purchase all the land necessary to give every schoolhouse a square of its own. In the smaller cities and villages, this ample space around the schoolhouse can be secured without any unreasonable outlay. A schoolhouse on a lot of a hundred feet square in any town of less than 20,000 inhabitants is an evidence of public meanness, hardly less than the meanness of a town of which we once heard, where the schoolhouse was built by the side of the graveyard, because that was public property and might be used without charge. Even if the land costs more than the building, it is better to get it and to hold it for its purpose. A church lot, where the building is only used for an hour or two on Sunday, and there is no expectation of sport in the intervals of worship, need not be very large, not larger than the needs of light and air require; but a school lot ought to be to the building which it incloses what the piazza of St. Peter's is to the Basilica; and it would be well also if it had the colon-

nades, in provision for rainy weather. The best blessing to the children will be that which is given to them in the open air, and not under the roofs—just as the successor of St. Peter gives Apostolic Benediction to the company under the sky, and not merely to the cardinals and bishops around the Baldachino. Plenty of play-ground free from fences and obstructions, and not curtailed by any prim landscape gardening, or lawns tabooed to flying feet, is the first requisite of a model schoolhouse.

2. Next we mention as essential to a good schoolhouse, *a well deep enough and capacious enough to insure a constant and unfailing supply of water.* Where there is an aqueduct, as in a few of the larger cities, such a well is not necessary, but the water ought always to be accessible and always abundant, enough to meet every need of thirst or cleanliness. A schoolhouse is poorly furnished that has no sink or basin, though it may have rods of blackboard. Water in every story of the house and in all the dressing-rooms, is just as important as the maps upon the walls, or the hooks for shawls and cloaks. The means of meeting physical thirst must be at hand as much as the means of meeting the thirst for knowledge. One of the luxuries of the old district schoolhouse was its pail by the door, which it was such pleasure to the urohins to fill from the neighboring well. How many of the new schoolhouses are chary of this bounty the summer visitor knows to his sorrow, after he has toiled upon the long stair-way, and reached, half fainting, those sky parlours of instruction. We heard it once given as a reason for not carrying water into the schoolhouse, that so much of it was spilled in using, and that a dry floor could not be kept where there was an active flow from pump or pipe. But the fresh water is worth more than the dry floor, and it helps the activity of blood and brain in the discharge of school duties. There was a school in one of our cities which gained popularity because there was a confectioner's shop on the ground floor, with a soda fountain, where the pupils passing up and down could solace themselves with lollipops and foaming sarsaparilla. That style is good, at least as far as plenty of water, which costs nothing, and makes the hands clean and the voice clear to speak and answer.

3. In connection with this second essential of a good schoolhouse we may mention a third, *that the outbuildings be ample in number, easily reached and without exposure, and be kept pure from nuisances.* Every wise Superintendent of Schools will visit the outbuildings, before he

decides that the school is what it ought to be. No apparatus of outbuildings is suitable where mephitic odours hang in the air, or where there is not sure means of removing or purifying excretions. In some cases the "closets" of the school are within the building, for the sake of convenience and neatness, but it is doubtful much is gained by that arrangement. It is safer to separate them from the halls and inner rooms, and to bring them nearer to the play-ground. The fault is usually that there are too few of them, and that they are not well constructed. Material that can not well be defaced is better in their construction. A large proportion of the vicious habits and vicious language of school children, which so vex and mortify anxious parents, is learned in the associations and practices of these outbuildings and from the legends and figures on their doors and walls. This is an evil that escapes rebuke too often from the prudery which avoids allusion to anything that is disgusting in connection with the methods of education, yet it is one of the worst, most obstinate, and most insidious of all the evils which beset the union of children in large companies. Where the outbuildings are vile and filthy, either by what they show to the eye or to the other senses, it is vain to hope that moral lessons from the teacher's desk will have much influence. The varnish of spotless seats and wainscots in the rooms above will be fatally tarnished by the obscene blots, which are remembered as long as the lessons.

4. *Broad door-ways, broad staircases, and wide and airy entrances-halls* are another essential part of a commodious schoolhouse. A cottage door, which opens inward, and a steep stair-way, on which only one or two children can step abreast, are absurd in a building which pretends to be convenient. The staircase should be wide enough to allow as many abreast upon it as can sit on a line in the seats of the school-room, and should be long enough to obviate the danger of falling. The halls should have room enough for easy movement, without crowding or jostling. A good schoolhouse will have quite as many facilities for ingress and egress as a theatre or a custom-house. Parsimony in this matter is disastrous in the end. We saw it once proposed after an accident in a New York schoolhouse by which many lives were lost, that cranes should be fastened above all the windows, with pulleys and baskets attached, so that, in case of fire or panic, the children might be lowered from the windows, and not exposed to the rush and trampling of crowds upon the stair-way. Such a proposition, carried out, might

have a fine Scriptural and ecclesiastical finish to the fortresses of juvenile learning, suggesting once the tower of the Cologne Cathedral, and the escape of Paul from Damascus. But, on the whole, a schoolhouse with wide interior passages will be more economical and more pleasing to the eye than one which is garnished with high bulkheads above the windows, and such swinging baskets. The basket apparatus will better fit that time which some see in the near future, when to man shall be given the kingdom of the air as of the earth, and schools shall travel in balloons, studying the wonders of earth and sea and sky in a panoramic way, as the car is wafted onward. The schoolhouse is not yet ready to be fashioned in that transcendental shape. A full quarter of the building ought to be in its halls and passages.

5. And then the good schoolhouse will have plenty of light. There will be in it no dark rooms, no rooms which will be used for study, where even on the darkest day of winter the eye is strained to read the page or to trace the demonstration on the blackboard, no rooms which need in school hours any artificial light. There can not well be too many windows in a school-room for needs both of light and of air. In the colour of the walls and the arrangement of the desks, indeed, there should be relief from the glare of light, which might injure the eyes and in the bright days of summer there will be comfort in blinds and shades. But a schoolhouse which is imperfectly lighted, which can take from the sun only so much of his rays as might come into a Fifth-avenue drawing-room, shrouded in upholstery, or a Gothic Cathedral with painted windows, is an outrage upon common sense. An architect who should propose to put stained glass into the windows of a school-room, even if this should celebrate the virtues of its martyrs, would probably be dismissed for his presumption. Yet his folly would be no worse than that of a building committee who should lessen the number of windows in order to get more wall room for blackboard; as did a committee that we knew. A school building ought to be so placed that it can be lighted from all sides, and that its central passages can be lighted from the roof. It ought never to be in a block, or to be wedged in between dwelling-houses or warehouses. If there are school-rooms on all its sides and corners, every side ought to be a front. It ought to have no look of a baron's castle or an artist's studio.

6. Of course good ventilation is a necessity in a commodious schoolhouse. All the other conveniences are nullified if the air is not fit to

breathe, if it is left to stagnate or can only be changed by the letting in of cold draughts from open windows. Perhaps the right way of ventilating schoolhouses as of ventilating churches and dwelling-houses and railway-cars has not yet been revealed. Let the best way be tried that is already known. Why should not every large schoolhouse have a fan in the cellar, which might be moved by air heated from the furnace or by the steam which is generated in the boiler? That no perfect apparatus has yet been found is no excuse for neglecting ventilation altogether, especially when double windows almost hermetically seal the school-rooms.

7. And finally, in the furniture of the school-room, there should be provision for ease of posture and freedom of motion, there should be room for the body as well as for the head and the hands, and the feet should not be fastened in any place, as if the pupil were set in the stocks. We are happily beyond the time when the test of industry was in steady bending over the text book, and when the rod rewarded with stripes the unfortunate wight who should lift his head and look around. If lessons are only faithfully learned, the pupils in the school-room may be indulged in that attitude of relief which was once the infallible proof of "idleness." The desks should be so constructed that this privilege of the present generation may be fairly enjoyed. Every scholar should have room for back and elbows and legs and feet, and should be able to change his position without interfering with neighbors on either side. All the light gymnastics of Dio Lewis or the heavy gymnastics of the athletes, practised in the short moments of "recess," will not make up the want of freedom for limb and muscle in the hour of sedentary study. There is a snare in this shapely and glossy furniture, when it is another form of the straight jacket and the pillory.

LEAD PIPES AND WATER.—In the city of Aberdeen the supply of water amounts to 1,000,000 gallons daily. It is distributed to the houses in lead pipes. Chemical examination of the water showed that there was in each gallon of water from one-twentieth to one-hundredth of a grain of lead. During 17 years no case of lead poisoning has been known to be caused by this small amount of lead. Galvanized iron, and lead pipe lined with tin, are both condemned by the best authorities. Two metals in juxtaposition are both oxidized when brought in contact with water by the galvanic action.

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

WEDNESDAY, July 19.

THIS afternoon and evening I attended the Sewing Society at Mrs. Bowers. There were several elderly ladies present, who seemed quite prominent in the affairs of the Society. They constantly addressed each other as "girls," and with as much spirit as if they were in reality girls.

At first I was amused by it, but afterward I felt that there was something touching about it, too; for the oldest may be young in feeling, and may ever be young in God's sight. Sewing Societies are almost proverbial for being "schools of scandal," but I am sure the most particular man could have found no fault with this one. In the evening a good many young people came in, and it was very pleasant to see the genial, cordial spirit among them. There were no *clique-à-clique*, no dividing into cliques, apparently no flirtations; and this is certainly a little unusual and remarkable among twenty to thirty young men and women. To-morrow we shall start on our Western journey.

August 26.—We reached ——— on Thursday, and I was so tired that I have done little but rest since then. Our journey out was a delightful one, as we went slowly, and with frequent stops at places of interest. We were hastened in our return by Dr. Moody, who received a sudden call home. About the same time news came to Henry of a legacy, to which he must pay immediate attention. We seem to be in the way of legacies, though Henry's is in not quite so pleasant a form as mine, a not very agreeable Aunt having fallen to his lot. She has lately lost her husband, and is left with very small means. She will be without a home, unless we take compassion upon her. Henry left the matter entirely to me for decision, telling me plainly the peculiarities of his Aunt Sarah. I have given my consent, and she will be with us some time next week.

During our absence I lent our Topsy to a friend, who has a number of children, and her report of Eliza's behavior with the children, and her management of them is so favorable, that the thought has come to me that, perhaps, I am doing an injustice to the girl in keeping her in a position she is not calculated for.

Sunday, August 27.—This is our last Sunday alone, and I can not help regretting it, for our Sundays have been such peaceful, happy days; but it may be better for us to have something to keep us from self-absorption and selfishness.

Henry and I have been talking about Eliza, and our conclusion is, that it is just as mistaken to keep a servant girl in a wrong position as it is to start a person of superior intelligence on a course of life not suited to his tastes.

About all I can get directly from Eliza is talking with her is her oft-repeated saying: "does like chillen wonderful, mum." I have decided to let her go when I find a really good place for her, and when I suit myself with another girl.

Tuesday, 29th.—Aunt Sarah made her appearance to-day, and what an appearance it was! She came in the noon stage from Plympton Station, and it seemed as if all her possessions would never be unloaded. There were three trunks, one with an ancient round top, in the condition of the head of Uncle Ned, so well known to lovers of negro minstrelsy; four bags of different shapes and sizes, two handboxes, a large basket containing the homeliest and greenest-eyed of yellow cats, another one filled with jellies and preserves left from Aunt Sarah's housekeeping, two umbrellas and a parasol, a cane which she keeps to remember her deceased husband by, a large shawl, a modern traveling-bag, and a bottle of brandy in her hand. The last-mentioned she declared that she can never be without, as she is greatly troubled with a "goneness at the stomach." After these things were landed in safety, a huge Boston rocker was handed down, which Aunt Sarah considers as necessary to her comfort as any of her possessions.

My heart sinks within me at the thought of constant companionship with this woman. She is tall and large, and walks with a short quick step, which is at the same time ponderous, making all the floors creak. Her head and face are round and fleshy, and she has small, pale blue eyes that look particularly cold and prying. She said very little at dinner, but I often found her small eyes fixed upon me, and from this and some peculiar noises in her throat, something between a cough and a groan, I imagined that

was not altogether pleased with something. But I must try not to imagine—I am very apt to do it—and I know from my own experience, and from observation of others, that it is a very unprofitable employment.

Wednesday, 30th.—It is like a breath of fresh air to get away from our legacy to sit alone for a time. I have been with Aunt Sarah all day, and I know that if we do get along it will be with constant self-repression and control upon my part. Her views upon all subjects are so different from mine that we can never harmonize, and I shall save much valuable time in not striving for that which can never be. What I must strive for are good nature, cheerfulness, a firm stand in my own position, but at the same time leniency toward the views so contrary to mine. Each day I must start out with my armor on, but must try to take all the comfort of its protection without any of the discomfort of its control.

Friday, September 8.—Mrs. Venner, the wife of an intimate friend of Henry, is very sick, and I have spent most of my time during the last week in her sick-room. Mrs. Venner's sister and sister-in-law live with the family, but although they are very anxious to take good care of their sister they do not succeed. The sister is one of those weak, incompetent persons, who have apparently not an idea of what is right and proper to do for the sick. The sister-in-law in her undirected energy represents the other extreme. She considers herself the most efficient of nurses, and is continually recurring to her skill. She never sits still, but bustles about, shakes up pillows, changes the position of furniture, and creaks round the room in a concentrated effort to keep still. When she can find nothing else to do she plies the sick one with reiterated requests to endeavor to think of something that she would like to eat or drink, or to have done for her. It required a little bit of management to work myself in as occasional nurse, but Mr. Venner and Henry kindly assisted. I wait under the plea of relieving them from their continued watching, and Mr. Venner induced his sister to leave his wife to my care by telling her that the children were suffering from want of attention, and that nobody could see to them as well as she. The spice of praise worked like a charm in turning the current of her energies.

I have done my very best in practising my theories about nursing, and I have the satisfaction of feeling that I have been a comfort to

Mrs. Venner. I have a great deal to learn yet about the art of nursing, and this I can best do by practising upon every opportunity.

Saturday, the 9th.—Aunt Sarah is not at all chary of her blame for my conduct in spending so much time at Mrs. Venner's. Last night, at the supper-table, she said, "Well, Henry, I am glad that *Ann* (she will persist in calling me *Ann*, a name never before applied to me) is going to spend a little time at home. My Good Book tells me that wives should be 'keepers at home.'" Henry replied by explaining this in the simple, natural way, and then said, "Aunt Sarah, don't you remember that our Good Book also gives us the best of examples of going about and healing the sick, and doing all kinds of good?" "I am afraid, Henry," she answered, "that you haven't recovered from your habit of perverting Scripture—any person who reads his Testament knows that Jesus Christ's habit of going about to heal the sick, and in other good works, was not intended for the imitation of women who have houses and families to attend to—else what should the Apostle Paul have been inspired to give this direction for?" Henry made no reply, at which I was a little surprised, for it looked almost like an abandonment of his position, but he afterward explained it to me. He said that Aunt Sarah knew him so well that she understood that he held to his first position firmly. An answer would have provoked her to an interminable discussion of that blind, one-sided kind to which she has been used from her youth up. Henry's father formerly lived in Littleton, the place from which Aunt Sarah came, and he says that he, when quite a little boy, often used to draw near the group of men gathered round the stoves in the old church, of a winter's morning, and listen to their repeated discussion of truths that were so plain as to need no argument.

His father never joined in these talks, and at home both his father and mother accustomed him to such a clear, decided way of accepting plain truths, that he learned soon to perceive how mistakenly these men often set up their individual opinions as authority in matters which they did not understand.

Thursday, September 14.—I have let Eliza go to Cousin Emma, and I am supplied with an Irish girl by the name of Madge. She came to me recommended by a farmer's wife, who has found her good help. I already think her an original among the gems of the Emerald Isle. I expected her the day that Eliza left, but she

did not come for two days after. The first notice of her advent was the sound of vigorous scrubbing in the kitchen. Going to see what it meant, I found Madge just arrived, her shawl laid aside, but her bonnet still on, scrubbing the three kitchen tables by turns. The only reason I could think of for so energetic a beginning of her labors was that she was affected with the feeling, that so many people have, of not knowing what to do with their hands in unusual circumstances. Aunt Sarah looks with favor upon Madge, for so far the latter pays the most respectful attention to her moral precepts. Our Topsy generally showed her teeth and tossed her head with a significant air, and followed up the advice by some comical performance, which seemed to convince Aunt Sarah that Eliza could not by any manner of means be one of the elect. Every Sunday I gave Eliza such religious instruction as I thought suited to her capacity, and I believe that the girl sincerely wished and tried to do right. Aunt Sarah's uniform, cold way of approaching people will never answer for all. The better we understand character in its variety the better we can accommodate our instructions, religious or otherwise, to those with whom we deal, and the greater influence we may have.

Sunday, September 17.—How thankful I ought to be, and I think I am, that my husband is thoroughly high-principled. I have been thinking about it a great deal for the last few days, and particularly to-day, in the quiet of my own room. Lightwood, for a country place, is a very trying one for young men, for there is one person here who exerts a powerful and bad influence over them. He is a lawyer, of fine talent, and a very fascinating, entertaining person. He is possessed of that rare gift, for which I know no better name than magnetic influence. I have seen the gift in a good man, and its effect was wonderful in drawing others up to a love of the good and beautiful—but it has the most pernicious effect when used by a man like Mr. Corning. He speaks with the most measured and polished respect of Christianity, but his daily life shows that he does not believe what he says. Seven of the best young men of the place he has led away into his habits of *refined carousal*. Four of the young men are married. Not one of them would be seen in the low grogshops of the village, but their example has undoubtedly had a great influence in leading young men of inferior intellect and position into the latter places. One of the

young men, who is married, holds a respectable position in the Lightwood Bank, but his habits are so interfering with the proper discharge of his duties, that he has received two or three admonitions, and, quite lately, a notice that further misconduct will procure his discharge. Henry is frequently begged to join these young men in their wine and card parties, but he invariably refuses, plainly giving the reason that he is strictly temperate and intends to be all his life. Then Henry is so honest, honest according to a woman's ideas, which, seems to me, are generally more right than men's.

Tuesday, September 19.—I spent part of the morning with Miss Margaret Stanton, who has been quite sick. I met there a very peculiar doctor, and his more peculiar wife. The doctor I had seen once before. One day last summer Henry had a call to Milburn, a place ten miles distant, and I went with him. Just before reaching the village we were surprised by the sight of a man rushing in haste from the gate of a pretty place and waving a large paper in his hand. He came directly toward us, and Henry stopped the buggy. The man, still waving the paper, said, "Doctor, doctor, here's my diploma—look at it—take it right in your hand and examine it. There, now, you see, I'm a regular practitioner—the prejudice against me has no foundation," etc. etc. etc.

Henry looked over the paper, and said that it seemed satisfactory. The man, a singular, wild-looking individual, was ready to enter into a long conversation upon his own merits and qualifications, but Henry drove on. It seems that he is a man of one idea in regard to disease. All his patients have liver disease, and all are treated alike by him, with one "sovereign remedy for all the ills that flesh is heir to," a remedy concocted by himself and kept on hand by the gallon. The remainder of our drive was enlivened by the most absurd anecdotes of this man and his wife, many of them so extravagant that I was quite suspicious that Henry was manufacturing some of them. Since the interview of this morning, however, I am prepared for believing almost any thing about them. Miss Stanton sent for this doctor in the first place, but he being ill, she employed Dr. Andrews, who soon brought her to a convalescent state. While I was with her this morning we were surprised by the entrance of this erratic doctor, much wrapped up and escorted by his wife. Just nodding to Miss Stanton, she marched the doctor to a lounge, and said,

"Down there now, and keep still." He said and she went on, "Now, I'll go and attend to the horse, and"—with a threatening look of the head—"don't you get up nor speak till I am gone." I gazed in mute astonishment, but I was to see and hear more remarkable things. When the woman returned she went into business at once by saying, "Well, now how are you feeling? I was very sorry the Doctor couldn't come to you when you were here, and it is at the risk of his life that I come now." "Yes," piped up a voice from the porch, "at the risk of my life. I have been a great sufferer, and no consideration but to attend you in your illness would have induced me to come out now." His wife immediately broke in, "You keep still. Now Margaret, what did Dr. Andrews do for you?" Mrs. Stanton gave the course of treatment in a few words, and added, "It worked like a charm, I'm mendin' very fast." The Doctor's wife, with a mournful expression, said, "Margaret, so wofully mistaken; you have a dangerous case of liver disease, and you ought to have your knees and soles of your feet rubbed with liniment before each meal, and take the Doctor's liver pills once an hour. Isn't that what she told me to do, Doctor?" "Exactly, my dear," answered the Doctor; "your judgment is un-

failing. Miss Margaret is in a dangerous state, and her only hope is in a change of physicians. You can tell her what I am willing to do for her."

"Well, Margaret," rejoined the wife, "the Doctor feels such an interest in you that he is willing to sacrifice his own health to take charge of your case. Turn away Dr. Andrews, and the Doctor will commence at once the only course to save you."

Knowing Miss Stanton's confidence in this Doctor, I was afraid she would yield to the double solicitations, but was so pleased with her answer, "Dr. Andrews done well 'nuff for me; I'm sorry the Doctor couldn't come, but I'm suited with the way I've got up, and I don't expect to make no changes," that I could have jumped up and hugged the old lady for her firmness. Thinking I had heard enough I took my departure, and spent my time while going home in wondering whether the practice of my pet theory would involve my being any thing like this woman. The result of my pondering was, that the cases are so different as to require no comparison. I have never had a thought of interfering with Henry's medical practice, but of following up his treatment with those little womanly attentions which no man can give—and this not in every case, but when it seems perfectly right and proper.

Arguing.

BY F. B. PERKINS.

THE use of arguing is to find out how far we agree.

This is a direct contradiction to the prevailing practice in arguing, which is, between lawyers and gentlemen generally, about the same as between a couple of attorneys in court—to try to beat the other side in this particular irrespective of principle. It is a lawsuit in which the combatant is at once client, lawyer, and judge. The natural result is, that each always awards itself the verdict, and the lies are exactly where they were when they were, only more so.

Raw brute force is close behind the justest judge—so immeasurable a shame it is to the thin varnish that calls itself Christian civilization. But a verdict, nor a decision, nor a sentence in the United States would be worth a cent were it

not for the Sheriff and his posse, who step right up to any recusant, fists clenched, club lifted, or pistol cocked. They knock him down, they smash his door, they seize his goods, they drag him off and lock him into a hole between stone walls. No violence, no justice!

Now, there is no sheriff in conversation. Hence the void verdicts of ordinary argument. The parties in interest are each man his own sheriff, too, as well as judge; and if, to use a legal phrase, either party attempts to "levy execution," it is a breach of the peace; for in such cases execution issues, if at all, against the body.

The United States is, theoretically, the best place for fair argument. The theory of this country is, that it uses the least of mere compelling law, and accomplishes the most by the

superior supplementing method of intelligent self-control. But fact and theory do not correspond in this point. Good manners is, up to the present date of human progress, a more powerful promoter of fair argument than free institutions. Well-educated Europeans, as a general thing, are fairer arguers than Americans.

Did any plaintiff or defendant ever become convinced that he was wrong, because the suit went against him? No, indeed. Much less, then, when there is no tribunal with power. If litigants are unconvinced, far more arguers.

Arguing, as usually managed, amounts only to stiffening one's convictions by defending them against the mistaken views of another. I shall soon forget the funny example of this definition once afforded me by an excellent lady who had written a book. She asked me to read it, and we had thereupon a conversation nearly as follows (the book was argumentative):

I.—What for?

She.—I want you to note your objections to the argument.

I.—But don't you think you're right?

She.—Yes. I know I am.

I.—Well,—of course. But now, just suppose—for the sake of the present argument, merely—that you were wrong, and suppose I could construct an actual proof—a demonstration—of it. Would it convince you?

She.—(With some hesitation, but squarely at last.) No, it wouldn't!

I.—Well then, for goodness' sake, what's the use of my reading it and noting my objections?

She.—I want to show how mistaken they are, and thus strengthen my argument.

I didn't do it.

I began by saying that the use of arguing is to find out how far we agree. That is the first use. If we know that, we shall not need any controversy to know how far we differ—that follows of itself. But suppose we find out that up to a certain point we go on together, and all at once there is a fork in the road, and one of us takes one road and the other the other?

At this point stop arguing, and compare views; or else talk about something else. Two people usually have diverging beliefs on many points, and reasons which are satisfactory to each mind for its own belief. He who loves to learn can always find instruction in comparing his own views with those of another. Almost any one enjoys stating his beliefs, and his reasons for them. And, after your interlocutor has done this, in answer to your inquiries and observa-

tions, if he doesn't want to hear yours,—when he gives you his values free, instead of exacting a compensation, and you have the best of the bargain.

A very good rule for arguing is, to talk from the same state of mind as if you were seeking counsel. Seeking counsel, as I look at it, is not, however, the holding up an empty bag on one hand and the emptying into it of "solid chunks of wisdom" on the other. It is the vivifying contact of two minds, more likely to result in the striking out of a valuable suggestion from one or the other of them, than the solitary brooding of one alone. I have frequently been applied to for advice, and have frequently been helpful to the applicant. Not because I had the dose he wanted, all labeled and ready like a quack medicine in a vial, by any means. My way is to sit down with the applicant and talk the matter over. If some useful suggestion does not come out of an earnest talk, where both parties are kindly, and where one wants help and the other wants to give it—why, they must be a couple of cabbage-heads; and I don't propose to admit this to be the fact where my head is one of them.

This way of arguing will prevent irritation, and therefore it includes the obvious rule, Keep your temper.

It will prevent the very common proceeding of trying to trip up your adversary, by taking advantage of some error or imperfection in his statements. To take such an advantage in business would be scorned by any fair man, but it is seldom thought unfair in arguing. Yet the trick is just as petty in one case as in the other.

It will prevent personalities, and the excusable anger which they cause.

It will prevent quibbling on words—another fruitful cause of excusable anger in argument.

For my own part, I greatly enjoy the process of comparing my opinions with those of other people, but I abhor what is usually called arguing, and never intentionally get into it. My experience is that my views may be changed after deliberate reflection on a new idea, suggested in the course of a comparison of views with another. But I don't think I ever had a good hard "argument" with any body, without being hardened in my own belief and feeling that my adversary was an ill-tempered ass. This is not a good thing.

THE man who has a clear conscience is rich.

Inherent Death.

BY E. RAY LANKESTER, B. A., OXFORD.

LET us now parenthetically inquire as to this inherent cause of death—this something in the organism which, more clearly than the other structures and properties of the organism, limits life. We say, "more clearly," for it is impossible to regard what was ascribed to "external agencies," without remembering that they have their correlatives in the organism itself.

How is it that absolute potential longevity is made to have a limit by heredity? How is it that natural decay is hereditary as to time and effect? The whole subject of the hereditary transmission of specific characters has been recently treated of by Mr. Darwin in his volumes on "Animals and Plants under Domestication," and the ingenious theory of Pangenesis started to explain and collect all these phenomena under one head. Though Mr. Darwin does not allude especially to senility, he mentions at length periodic developments agreeing as to the time of their appearance in both parent and offspring. The theory of Pangenesis is thus stated: "I assume that cells before their conversion into completely passive or 'formed material,' throw off minute granules or atoms, which circulate freely throughout the system, and when supplied with proper nutriment multiply by self-division, subsequently becoming developed into cells like those from which they were derived. They are supposed to be transmitted from the parents to the offspring, and are generally developed in the generation which immediately succeeds, but are often transmitted in a dormant state during many generations, and are then developed. Their development is supposed to depend on their union with other partially developed cells or gemmules which precedes them in the regular course of growth. Gemmules are supposed to be thrown off by every cell or unit, not only during the adult state, but during all the stages of development." (Darwin, loc. cit. vol. ii, p. 374.)

We may use this theory to explain the hereditary character of senility. The gemmules, "when supplied with proper nutriment, multiply." As long as there is nutriment for them they will continue to be produced, but when the superabundance of nutriment ceases, which, as we shall see, is soon after growth is quite completed, their production ceases; they are thus

limited in number, and, being called upon in repair and reproduction, are gradually exhausted. But it is not necessary to have recourse to the pangenetic gemmules, which are only considered by Mr. Darwin as provisional hypotheses. The physiological units of Mr. Herbert Spencer, which he describes as follows,* will suffice as an assumption; or, indeed, we need go no further in explicitness than is involved in the assumption of "a matter of life." What we have to explain is why Mr. Spencer's units, or the "matter of life," should be limited in quantity in various organisms, so that life terminates at different periods, even when two species compared appear to have been subjected to the same external agencies. The old writers distinguished the "*vires in posse*" and the "*vires in actu*." The aged, they said, had not, as the young, this under-stratum of "*vires in posse*" to call upon in cases of exhaustion. "We must never forget to insist," says M. Reveill  Paris , "upon this fundamental principle, that the unknown force of life, *vis addita qu dam*, diminishes more and more with the progress of age." "*Ex viribus vicinus*," said Galen. A young man is commonly said to overtax his strength and to injure his constitution by great expenditure of force when young. The common idea expressed in these various statements of opinion is that a store of life-force or life-material exists, which the young accumulate, which increases up to a certain amount, but which ceases to do so at some period, and thenceforward dwindles. Professor Huxley has well expressed this in terms of life-material, in a lecture delivered at Edinburgh in January, 1869. "At any rate," says Professor Huxley, "the matter of life is a veritable *peau de chagrin*, and for

* Mr. Spencer, after describing the organic "polarity" seen in the phenomena of repair and development, says, "If then this organic polarity can be possessed neither by the chemical units nor the morphological units, we must conceive it as possessed by certain intermediate units, which we may term *physiological*. There seems no alternative but to suppose that the chemical units combine into units immensely more complex than themselves, complex as they are; and that in each organism, the physiological units produced by this further compounding of highly compound atoms, have a more or less distinctive character. We must conclude that in each case some slight difference in their mutual play of forces produces a difference in the form which the aggregate of them assumes."

every vital act it is somewhat the smaller. All work implies waste, and the work of life results directly or indirectly in the waste of protoplasm." Is there any direct evidence of the existence of such a store of force or material as is evidently usually supposed to exist in organisms? If we look at the question from the point of view of force it makes little difference, for force implies matter in a particular condition. It could not be maintained that one organism might possess a greater store of vital force or life-power than another, without there being some material representative of that force. Hence we must—whether taking force or matter as our text—look for some matter in the young which disappears in the old. Protoplasm, the physiological basis of life, which no doubt is the same thing as that which Dr. Beale terms "germinal matter," is a matter which by its increase or accumulation in an organism must increase its power—in fact, its amount of life; and, conversely, when diminished, the amount of life must be diminished. It is from the changes of this germinal matter that the formed tissues result, that repair is effected, force evolved, nutriment elaborated, secretion manufactured; and it is a matter of observation that this germinal matter is more abundant in young than it is in aged organisms. The numerous preparations of tissues, and their description by Dr. Beale, the result of his carmine process, clearly demonstrate this, and it is on all hands admitted. The quotation which follows from Mr. Paget is a fair description of that diminution of repairing power to which we shall have to refer, while Dr. Marshall Hall has largely detailed the decline of the vital powers in old age:

"Some people, as they grow old, seem only to wither and dry up; sharp-featured, shrivelled, and spinous old folk, yet withal wiry and tough, clinging to life, and letting death have them, as it were, by small instalments slowly paid. Such are the 'lean and slippered pantaloon,' and their 'shrunk shanks' declare the pervading atrophy. Others, women more often than men, as old and as ill-nourished as these, yet make a far different appearance. With these the first sign of old age is that they grow fat; and this abides with them till, it may be, in a last illness, sharper than old age, they are robbed even of their fat. These too, when old age sets in, become puffy, short-winded, pot-bellied, pale, and flabby; their skin hangs not in wrinkles but in rolls; and their voice, instead of rising 'towards childish treble,' becomes gruff and husky."

The germinal matter which abounds more in youth than age, obviously embraces Mr. Spencer's physiological units, thus accounting for and correlating its power of general and special repair. It also must include Mr. Darwin's gemmules, and must be immensely called upon therefore in reproduction, far more largely, perhaps, than is represented by the mere bulk of the generative products. Mr. Spencer recognizes this, and alludes to the shrinking and diminution of the germinal matter in advancing life in the following passage: "Protoplasm, which has become specialized tissue, can not be again generalized and afterward transformed into something else, and hence the progress of structure in an organism, by diminishing the unstructured part, diminishes the amount available for making offspring; or, we may add, for carrying on the work of life. This same store of living matter is called upon and reduced in cases of great expenditure of force, such as are greater than the contemporaneous power of assimilation can supply; and it seems not improbable that this germinal matter may be the store from which Professor Parkes supposed a muscle to draw a supply of nitrogenous aliment in the absence of nitrogenous food, and when only carbo-hydrates and hydro-carbons had been supplied. This is consistent with what is known of the great danger of excessive exertion, especially in the absence of abundant nutriment.

The ovum is composed, in its very earliest stages, of nothing but this protoplasm. As development and growth advance it gives rise to the formed tissues, increasing itself also in bulk. But the germinal matter never increases at the same rate as the whole organism; it is always diminishing relatively to the whole, though increasing absolutely as long as growth continues. This gives us some insight into the way in which the change in the vitality of youth and age occurs.

But there is a more important action than this. What is it that limits growth? what gives the limit to size? Mr. Herbert Spencer ("Principles of Biology," vol. i, p. 128) very fully enters into this matter, and clearly shows that *expenditure* (expenditure which uses the matter of life, and prevents its accumulation) increases more rapidly than growth; there is not a direct agreement between the increase of the one and of the other. This appears from the following considerations. It is demonstrable that the excess of absorbed over expended nutriment must, other things being equal, become less as the size of the animal becomes

greater. In similarly shaped bodies the masses vary as the cubes of the dimensions, whereas the strengths vary as the squares of the dimensions. "Supposing a creature which a year ago was one foot high has now become two feet high, what are the necessary concomitant changes that have taken place in it? It is eight times as heavy, but the muscles and bones have increased their power only in proportion to the areas of their cross sections; hence they are severally but four times as strong as they were. Thus, while the creature has doubled in height, and while its ability to overcome forces has quadrupled, the forces it has to overcome have *grown eight times as great*. Hence, to raise its body through a given space its muscles have to be contracted with twice the intensity, at a double cost of matter expended." Mr. Spencer shows that the same relation is true for the absorbing surface, which has only increased fourfold, and for the circulation of nutriment, which has to be transmitted to an enlarged periphery. Thus, then, the period of growth must be limited; thus a period must be reached when the germinal or living matter is no longer accumulated but is destroyed; thus the inherent cause of death has a structural existence. The apparent absence of inherent decay in many trees, in fish, in some reptiles, is alluded to by Mr. Spencer. He attributes it, as we have done above, to their exceedingly small expenditure; trees and plants generally exhibiting no personal expenditure at all, while fish and cold-blooded inert reptiles show very little indeed. Mr. Spencer also remarks that a strict inductive confirmation of the law of increase of expenditure and of growth must not be expected, since the bodies compared, *e. g.* fish and mammal, are not of the same density or chemical constitution entirely.

Another circumstance coöperates with the arrival of a period of balance between the expenditure and the accumulation (and depends on that period) to influence the natural termination of life. The condition of equilibrium between expenditure and nutrition, growth having ceased, might be maintained for an indefinite time were it not that precisely at this period a new form of expenditure, involving a very severe tax, sets in—namely, reproduction. It is when a stationary condition has been reached that we may anticipate from general laws new adjustments of the whole aggregate; while the changes of the more adaptable state of *growth* were in course, while concrete shape was being built up, discrete shapes were less likely so to be; and hence

it is, when growth has ceased, or nearly so, that reproduction sets in.

The effect of this additional tax is to start the organism more rapidly down the incline toward the termination of the road of life, the length of time occupied in the downward run depending no doubt on the height of the hill which has been mounted, and on the friction, inclination, and additional acceleration, if any, of the descending body. An accident on the way may bring the imaginary rider over some precipice to the bottom of the course at once, and it is little likely that he will succeed in avoiding the many dangerous corners and pitfalls, which increase toward the end of the road, and finally expend the full amount of impulse in traversing the whole course.

Some organisms may continue to grow and produce young throughout their life; but the earlier reproduction is commenced, and the more rapidly it is carried on the sooner must the increase of the organism's bulk be stopped, and so waste and death ensue. Fish, mollusks, and trees are the extreme cases of this protracted period, which was explained as due to small personal expenditure. A test of the superabundance of the matter of life is seen in the reproduction of lost parts which Salamandroid Amphibians, and also Crustacea, exhibit during a considerable period of life, though it may be questioned if they possess it after their last moult, if they ever have a *last* moult. Salamanders and Crustacea belong to the same category as fish.

A second lot of organisms die at once upon the setting-in of reproduction by the rapid abstraction of the matter of life contained in the eggs and sperm. The Protozoa are typical of this group, for in them the formed matter of the organism is all that remains after reproduction, the entire mass of the germinal or living matter being used in reproduction. Hence there is no after-life, no down-hill run. It is the same with insects and with annual plants; so much of the living matter is taken that they have not power to recover the loss; even assimilation is stayed. The animals of the former group of small expenditure could recover their generative loss, not being called upon simultaneously in other directions.

A third group have the procreative subtraction coming on late. It checks growth and finally stops it, but it is so moderate as to leave the organism enough living matter to go on with, and life ceases only when the living matter is so far reduced as to be unable to keep the existing structures in adequate repair, or pro-

vide sufficient material for the necessary outlays of force. Such cases are presented by mammals, birds, and possibly some trees and shrubs.

It may not be out of place here—briefly to state how death may be brought about by mechanical causes and external agencies in those organisms whose period of natural decay is very remote. There is of course the chance of accident, which is greater in a long life than a short one. But there are two examples of self-adjusting, or rather self-destroying tendency in the organism, to which allusion may be made. Trees, increasing in size as they grow older, expose a larger surface to the wind, while the roots can not penetrate beyond the limited soil; they thus are more liable to get blown over year by year. Again, increasing as they do, and being stationary in their position, they encroach on each other's area, and exhaust the limits of the soil and space by their united action, what is enough for one not being enough for five or six. In the case of animals, the same mechanical limit appears; where the food is diffused and taken in numerous but small mouthfuls (*i. e.* as in herbivorous and scavenger animals, not *prædaceous* animals), five small mouths will be more efficient in supporting five pounds of an animal than one big one. It is thus that the Maori fly is expelled by the smaller European house-fly. It is thus that large fish, large mollusks, large crustacea of species with diffuse food receive a limit to their life. The greater danger of all kinds involved in increased *surface* also tends to limit life in such organisms.

We have yet to ask how the exact or approximate period of natural death comes to differ in various species by heredity. We have seen how it is possible for a limit to be inherited, but how does the period so limited come to be an hereditary quantity characterizing species? How is it that it varies in animals which commence life and carry it on under very much the same conditions? The specific accidents, actions, wear and tear to which different species are severally subjected are not sufficient alone to account for the fixity of the period, though their influence is important. There is something additional, some more direct cause than these, and we must look for it in the quantitative limitation of the germinal matter itself, varying in species. If it were not so, how can we account for the fact that a cow and a sheep, which start from ova so exactly identical in form and size, composed probably of equal amounts of germinal matter or protoplasm, subject as they develop to the same external influences, living perhaps side by side in the

same field, yet differ in their inherited term of life, which appears to be, as nearly as can be guessed, about twenty years for the larger and twelve for the smaller ruminant? We have seen that the expenditure increases during growth more rapidly than the bulk, more rapidly *à fortiori* than the accumulation of germinal matter, which we saw did not increase even as rapidly as the bulk. We may regard this germinal matter as a sort of stock-in-trade with which the losing game of increasing profit or accumulation, but more rapidly increasing expenditure, has to be played. "The rate at which a man's wealth accumulates is measured by the surplus of income over expenditure, and this, save in exceptionally favorable cases, is determined by the capital, *with which he begins business.*" In the transactions of an organism we trace the same three elements. "There is the expenditure required for the obtainment and digestion of food, there is the gross return in the shape of nutriment assimilated or fit for assimilation, and there is the difference between this gross return of nutriment and the nutriment that was used up in the labor of securing it." As long as this is in excess we have an increase of living matter and an increase of structure, and clearly the larger the capacity of the animal to take in food, etc., on commencing life (individual life), the larger and the *longer* will be the accumulation of germinal matter by the increase of bulk (profit). Say that each year the profit doubles, while the expenditure trebles, with a capital at starting of six units, while the expenditure is a third of the capital, and the profit cent. per cent., or equal to the capital at starting. In the *fourth* year, with these figures, we shall find that the capital commences to diminish, the figures representing its condition in the same units being respectively for the four years, 7, 13, 19, and 25, while it descends to 1 in the fifth year. Now, for comparison, suppose nine units as the initial capital, and the same relations of expenditure and profit, we shall find that the diminution does not commence till the *fifth* year, the growth thus continuing a year longer, the figures being 15, 24, 35, 36, and 33 respectively.

These two cases, in which the quantities are of course merely arbitrarily chosen for example, and in which the ratio of expenditure and profit as to increase is exaggerated, suffice to demonstrate the principle, which may be applied to organisms. It is because the calf at birth is a much larger animal than the lamb, having been carried longer by its parent, who from her greater size could of course give to

the offspring a greater proportionate amount of living matter to commence life with, that the cow lives longer than the sheep, or rather inherits a later natural limit to life. The quality of the germinal matter and many other conditions which have to be provided for in laying down such rules as this, by the expression "*æteris paribus*," must always be taken into consideration.

We have, then, seen reason to think that the duration of life, after growth is completed or

coming to an end, depends on the amount of living matter accumulated during growth, and that this depends on the size at birth, *ceteris paribus*. Thus it is that we trace the rationale of that connection between time of growth, time of gestation and potential longevity, which has been pointed out, though we can see no good reason why the number five or any other should express the ratio for the whole class of animals.

Is Lifting a Dangerous Exercise?

BY LEWIS G. JAMES.

IN these days of "Lifting Cures" and "Health Lifts," the question of the *safety* of this method of exercise, especially in the cases of delicate invalids, women, and children, is one of the first which meets the advocates of the new system of Physical Culture. Very many, warned by personal experience or the advice of careful physicians, find an almost insuperable objection to this treatment in the fancied danger attending its use. This prejudice, however, results from a misconception of the method of exercise, or of the nature of the apparatus used in its application. The term "Lifting" is perhaps unfortunate in conveying to almost every novice an idea of a stooping motion of the body, and an abrupt strain upon the spine, *separating* the vertebrae, and producing injurious results by compression of the abdominal muscles, tending to hernia or rupture.

The effect actually produced by a well-directed lifting exercise, on a properly constructed apparatus, upon the muscles of the back and abdomen, and the spine, is directly opposite to that supposed. There is no stooping, or bending the spine, or body, during any portion of the action. The knees are flexed with the body erect, and straightened gradually and gently, the weight being supported by the hands. The spine is thus consolidated, the vertebrae compressed together, instead of separated, the muscles of the abdomen gently contracted, and the internal organs, throughout the entire movement, retain their natural positions, supported by the surrounding muscular walls and attachments. The movement is gentle, uniform, and slow, adapting the weight very gradually to the muscular tensions through the action of steel

springs, without which no apparatus can be completely safe, or equally beneficial. The amount of weight is graduated to the condition of the patient.

Thus rupture or hernia, and all abdominal displacements, find here the most natural and sure remedy, while the gentle though powerful impulse given to the circulation throughout every organ of the body, internal as well as external, vital as well as muscular, forces the morbid accumulations into the natural channels of evacuation, clearing the system of waste matters, and carrying the nutriment, properly organized in the blood, to every portion of the frame. In this beautiful process of reconstruction, removing the old and effete, generating the new and healthy tissue, we find a sure promise of health, vigor, and renewed life.

The disciples of The Lifting Cure are not disappointed to detect popular errors concerning its method, occasional errors in its application resulting from ignorance of its laws or the use of imperfect and uncouth apparatus, and sometimes results laid at its door, which in no way belong there. The good old "Water-cure," so beneficial when judiciously used, has probably washed many people out of the world, through ignorant experimenting in its early history. The habit of eating is an old and good one, yet how many die every year, from the injudicious use of food. Quality and quantity here modify the result, as they do in the lifting exercise.

The public may expect to be flooded with all kinds of "lifting machines," claiming patronage on the merits of thunder stolen from The Lifting Cure. I expect to hear of injuries inflicted, and false prejudices aroused against our system,

resulting from these experiments, for which we are in no way accountable.

The Lifting Cure bases its results—

1. On its judicious application or use; and
2. On a scientifically constructed apparatus;

And claims that with the most perfect apparatus, comprising the spring and dead-weight combination, approved by the Butler System, *without the right method of application*, comparatively little benefit may be expected; while the most judicious use of a crude dead weight or lever machine, without springs, may result in injury instead of benefit, and can not produce that *vital invigoration* so essential to an increase of strength and health.

I had occasion not long since to address a communication to The Health Reformer, in correction of certain misstatements, accidental no doubt, of no less an advocate of Health Reform than Dr. R. T. Trall, concerning the apparatus and system which I advocate. This communication was, somewhat unfairly, I think, refused admission to that journal, only one or two points were noticed at all in reply, and those only admitting that partial truth which *may* be most useful in conveying a false idea.

In reply to the charge of "monopoly" against the Butler System, reiterated by Dr. Trall, it may be sufficient to say that we hold the written application of the Doctor for the right to introduce and control the aforesaid "monopoly" in the city of Philadelphia. We believe that we represent the feeling and motive of the patentee of the apparatus as well as our own, in the affirmation that we only desire to secure a fair presentation of our system on its merits, in the hands of competent persons, properly educated to use and apply it.

The following comprises the main points of the communication referred to:

"... Throwing out the experiments of Windship on rude and cumbrous apparatus, it is not unfair to claim for Dr. Butler and his co-laborers the honor of discovering, perfecting, and naming the new curative and strength-giving agent. All the apparatus now constructed and in use, under the name of Lifting Cure, Health-Lift, Combination Lift, etc., were invented subsequent to Dr. Butler's, and after careful investigation of the different styles of apparatus and the claims of their reputed inventors, we are unable to find in them any fundamental improvement on that patented and used by Dr. Butler.

"The object of this communication, however, is not so much to describe and advocate the Butler System, as to correct, authoritatively,

some errors of fact and theory, into which a few people who have not thoroughly investigated the subject, seem to have fallen.

"1. The objection of the writer of the article in your August number to the Windship apparatus is just, but as a matter of fact, Dr. Windship has lifted on his yoke-lifting apparatus not *seventeen hundred* but *twenty-seven hundred* pounds. His greatest lift *by hand* is *twelve hundred and eight pounds*. But he can hardly claim to be the "strongest man in the world," as he has been out-lifted by both these methods. Prof. Butts of Ohio lifted *thirty-four hundred pounds* by yoke, and a Mr. Pierce of this city has raised more than three thousand pounds in the same manner; while Dr. Butler of Boston in the hand-lifting apparatus, in the presence of the writer, lifted *twelve hundred and twenty pounds*, and considers himself able, under favorable circumstances to raise thirteen hundred.

"2. Dr. Reilly of Chicago can hardly be said to have '*invented a machine*.' Dr. Reilly's specialty, the side-lift, was invented and used by Dr. Butler years before Dr. Reilly ever heard of it. I presume Dr. Reilly will base his claims as an inventor upon a patent received by him for an alleged improvement in lifting *handles*.

"3. The reason given in your article for declaring Dr. Butler's method of employing springs '*essentially erroneous*,' derived I presume from a similar misapprehension of Dr. Smith in his pamphlet, will be seen to be itself erroneous, when the fact is known that the principal spring on which the weight is suspended, has the greatest tension at the commencement of the lifting motion, instead of the least, growing less continually as the weight is raised, thus perfectly fulfilling the law of graduation, and securing complete coöperation and safety in exercise. Beside this central spring, Dr. Butler's machine is rendered still further elastic by cartilages of rubber and platform springs having the *greatest elasticity* and *least* tension at the starting point, the value of which is sufficiently apparent to every scientific investigator.

"4. The Lifting Cure, while presenting primarily the all-important law of 'self-cure by self-action,' and embodying a method of culture whereby the *vital power* is developed, and applied to combat disease and increase strength, instead of producing an abnormal deformity of external muscular tissue, claims and uses all other hygienic agents as its aids. It avoids the practically fatal error of 'putting too many irons in the fire,' yet gives to thousands their first lessons in hygienic instruction. We preach the whole 'Gospel of Health'—nothing less."

The Two Sussex Lads.

I.

THERE lived two lads in Sussex, some forty years ago,
 Dick* was the name of one of them, the other was named Joe;
 Both were the sons of farmers, and both had prospects fair,
 And of schooling both, for country lads, had got a bounteous share.

II.

To gather knowledge of all kinds, Dick ever was intent,
 And in reading good and worthy books his leisure hours were spent;
 Whene'er he wandered through the fields, he ever tried to find
 Some lesson good in all he saw with which to store his mind.

III.

Joe never read a book at all unless some silly tale—
 Give Joe his paper and his pipe and pot of home-brewed ale,
 And he would sit and sip, and smoke and read, until the drink
 Rose to his brain and drowned the power to understand or think.

IV.

Dick went away to London town his fortune there to try;
 In study and in anxious toil his time of youth went by.
 Whate'er he thought was right to do, he did with all his might;
 He climbed by Duty's rugged path to Honor's topmost height.

V.

Joe's father died, and so he got the farm, but soon it passed
 Into another's hands, for Joe lived very hard and fast.
 The wealth his father boarded up, and toiled so hard to win,
 Joe spent in drunken revelry and every kindred sin.

VI.

Joe died upon a lair of straw, in a cellar foul and dim,
 No kind voice soothed his dying hour, for no one cared for him;
 And when his wasted form was laid within the pauper's ground,
 No tear bedewed his nameless grave, no mourners stood around.

VII.

Dick died, and kind hands closed his eyes; and round his coffin stood
 Men from all nations far and near, the noble and the good.
 When o'er the mountains and the seas, the mournful tidings swept
 That he was dead, humanity bowed down its head and wept. —

VIII.

Of these two lads, the one who spent his youth o'er pipe and pot
 Died, as the drunkard ever dies, uncared for and forgot:
 While Richard, by untiring zeal and steady toil, became
 The man than whom the world as yet can boast no loftier name.

* Richard Cobden.

Height and Weight.

WITHIN the last few years public attention has been drawn to the question of what individuals weigh, by the facilities afforded for weighing by the construction of weighing-chairs. These chairs are not only to be seen at the Crystal Palace, in London, where diminutive boys tout for custom, offering to tell you your "correct weight, for only a penny, sir," but they are often seen at the stations of the Metropolitan Railway and many other places in the country. The practice, therefore, of getting weighed is obviously on the increase, and we want to utilize the knowledge thus gained by showing how it may be turned to most advantage. It will be easily seen that to know the weight of a person without reference to some other standard, such as height, would be of but little advantage. But if by taking the height of a person we can say what he ought to weigh, then we have a means of ascertaining what persons ought, or ought not to weigh. The difficulty has been to determine what a man of a certain height really ought to weigh. If this can be determined, then we can say whether a man of a certain height exceeds or falls short of the average weight of men of his stature.

One of the earliest efforts made to obtain any thing like a fixed relation between height and weight was that of Dr. Boyd, who weighed a number of inmates at St. Marylebone Workhouse. He took the height and weight of one hundred and eight persons laboring under consumption, and found they measured five feet and seven inches, and weighed ninety pounds. He then measured and weighed one hundred and forty-one paupers who were not consumptive, and found that their average height was five feet and three inches, and that they weighed one hundred and thirty-four pounds. This subject attracted the attention of the late Dr. John Hutchinson and he determined to take the height and weight of all classes of persons in the community. In this way he collected the height and weight of upwards of five thousand persons. This list, however, included persons who exhibited themselves as giants and dwarfs, and other exceptional cases. He therefore reduced his instances to two thousand six hundred and fifty persons, all of whom were men in the vigor and prime of life, and included sailors, firemen, policemen, soldiers, cricketers, draymen, gentlemen, paupers, and pugilists. This group

of cases was intended to make one class as a set-off against another, so as to get a fair average. The following is the result of Dr. Hutchinson's observations:

Height.	Weight.
5 feet 1 inch	120 pounds.
5 feet 2 inches	126 pounds.
5 feet 3 inches	133 pounds.
5 feet 4 inches	139 pounds.
5 feet 5 inches	142 pounds.
5 feet 6 inches	145 pounds.
5 feet 7 inches	148 pounds.
5 feet 8 inches	155 pounds.
5 feet 9 inches	162 pounds.
5 feet 10 inches	169 pounds.
5 feet 11 inches	174 pounds.
6 feet	178 pounds.

Of course the result of these investigations of Dr. Hutchinson can only be considered as approximative, and he himself thought that a larger number of observations would lead to a more perfect law. The fact is, his observations are quite sufficient to establish all that we need, and goes to show that among a certain set of healthy men his estimate of weight and height may be regarded as an approach to a healthy standard. It is only where considerable departures from the estimates given by Dr. Hutchinson take place, that any particular case demands attention. If this table is examined, it will be seen that the increase in weight for every inch of height is a little more than five pounds. In fact, allowing for any error in observation, we may say that Dr. Hutchinson's table is reducible to the law that for every inch of stature beyond five feet and one inch, or sixty-one inches, a healthy man increases five pounds for every inch in height. If this deduction be accepted, we may very much simplify Dr. Hutchinson's table, and say that as a rule, a man's weight increases at the rate of five pounds for every inch of height, and this rule holds good for all practical purposes. Starting then with a person five feet in height, who, according to the assumed law, should weigh one hundred and fifteen pounds, we obtain the following results:

Height.	Weight.
5 feet	115 pounds.
5 feet 1 inch	120 pounds.
5 feet 2 inches	125 pounds.

<i>Height.</i>	<i>Weight.</i>
3 feet 3 inches	130 pounds.
3 feet 4 inches	135 pounds.
3 feet 5 inches	140 pounds.
3 feet 6 inches	145 pounds.
3 feet 7 inches	150 pounds.
3 feet 8 inches	155 pounds.
3 feet 9 inches	160 pounds.
3 feet 10 inches	165 pounds.
3 feet 11 inches	170 pounds.
3 feet	175 pounds.
3 feet 1 inch	180 pounds.
3 feet 2 inches	185 pounds.
3 feet 3 inches	190 pounds.
3 feet 4 inches	195 pounds.

Although this law is approximately good for main number of cases, even above and below table, it is practically found, and especially the case of children and growing persons, that there is a wide difference of weight at heights below five feet.

Attention may be also drawn here to the fact that there will constantly occur in the community instances of persons where either the muscular or bony systems are excessively developed, and who consequently weigh more or less than their height. Dr. T. K. Chambers, in his admirable essay on Corpulence, published in 1859, calls especial attention to the measurements of Mr. Brent on the assumed weights of the statues of antiquity. In order to get at this, Mr. Brent immersed in water accurate copies of these statues, and by ascertaining the quantity of water they displaced he calculated their weights. Dr. Chambers has taken the pains to reduce the absolute weights of these statues to assumed heights, and thus compared the heights and weights of these statues of antiquity with Dr. Hutchinson's modern man. Without giving the whole of the heights and weights, we present the series at the assumed height of six feet. Thus:

<i>Height.</i>	<i>Weight.</i>
Bronze Tumbler..... 5 feet.....	155 pounds.
Hutchinson's Man..... 5 feet.....	178 pounds.
Dying Gladiator..... 5 feet.....	196 pounds.
Theseus, British Mus... 5 feet.....	210 pounds.
Hercules, British Mus... 5 feet.....	234 pounds.
Farnese Hercules..... 5 feet.....	259 pounds.

On this table Dr. Chambers remarks: "Of the statues here selected, the Bronze Tumbler may be taken as the type of extreme lightness and activity, the Dying Gladiator of robust strength; in Theseus and the smaller Hercules the sculptor's ideas of a hero where the bodily

strength must be equal to that of any possible man. The Farnese Hercules exhibits a development of muscle greater than is ever known to exist in the human species."

Dr. Chambers also gives the height and weight of certain celebrated prize-fighters, the result of Mr. Brent's observations, which makes it very obvious that in certain cases the great weight depends on the muscular and osseous development.

<i>Height.</i>	<i>Weight.</i>
Perrins..... 6 feet 2 inches.....	218 pounds.
Caunt..... 6 feet 2 inches.....	203 pounds.
Spring..... 5 feet 11 inches.....	182 pounds.
Jackson..... 5 feet 11 inches.....	196 pounds.
Bendigo..... 5 feet 9 inches.....	168 pounds.
Johnson..... 5 feet 8 inches.....	187 pounds.
Slack..... 5 feet 8 inches.....	192 pounds.
Mendoza..... 5 feet 7 inches.....	172 pounds.

The conclusion we come to with regard to these weighings and measurements is that all ordinary departures from the average height and weight of the body, deduced from Dr. Hutchinson's tables are due either to an increase or decrease of the fatty matter or of the adipose tissue in the body. Thus, taking the composition of a human body weighing one hundred and fifty-four pounds, and measuring five feet and eight inches, it will be found that it contains twelve pounds of fat. It is then mainly due to the diminution or the increase of this fatty substance that human beings weigh more or less than the standard weights given in the above table. It will be therefore here worth while to inquire what is the use of fat in the system, and what indications are afforded by the height and weight of the human body for caution in diet and regimen.

The exact way in which fat is produced in the tissue of plants and animals is not known, but there is evidence to show that it is found very generally in the tissues of plants, especially in the seeds. Oil, when used for commercial purposes, is mostly obtained from the seeds of plants, as seen in castor oil, rape oil, linseed oil, cocoa-nut oil, palm oil, and a hundred others. As it is found in the seeds of plants, so it is in the eggs of animals. The embryo of all animals is developed in contact with oil, of which we have a familiar instance in the yolk of the egg of birds. It appears also that the muscular and other tissues grow under the fostering influence of the adipose tissue.

Besides this primary influence on the growth of the body, fat subserves many other purposes.

In the first place, it seems a reserve of material for producing muscular force when needed. Animals grow fat in summer, but as the supply of this material becomes scanty in winter they lose their fat and get thin. Man himself gets fat in summer and grows thin in winter from the demand on this store for heating purposes. Hybernating animals go to their winter sleep sleek and fat, but wake up in the spring lean and meager, from the loss of fat in maintaining the animal heat necessary for life. Fat is thus seen to be an essential of animal life. Where there is too little deposited for the purposes of life, then serious disease has already commenced or may set in; while on the other hand a redundancy of this deposit may seriously interfere with the functions necessary to life.

It is from this point of view that the value practically of a knowledge of the height and weight of individuals becomes the more apparent. When the weight of a person is much below his height, then it may be suspected that some disease has set in, which may go on to the destruction of life. One of the earliest symptoms of consumption, the most fatal disease of civilized inhabitants of the world, is a tendency to loss of weight. Long before any symptoms are present of tuberculous deposits in the lungs, this loss of weight is observable in persons afflicted with consumption. At this stage a large amount of evidence renders it probable that the fatal advance of this disease may be prevented.

On the other hand, this knowledge of the true relations of height and weight presents us with individuals who weigh a great deal more than the standard presented by the above tables. In certain individuals, and, in fact, in particular families, there is a tendency to develop adipose tissue. However free from fat may be the food, what little it contains is arrested in the tissues of these individuals, and they become "fat;" that is, they weigh more than their height. The consequences of this fatness are very various. The fat may be so deposited over the system as not to be necessary to the functions of life; but every one can understand that, in the case of two men of equal stature, say five feet and eight inches, one having to carry one hundred and fifty-four pounds and the other one hundred and sixty-eight, the latter will be at a disadvantage. This arises from two causes. The heavier man carries, in the first place, a greater weight, and in the second place, his heart has to project into the tissues of the body a larger amount of blood in order to keep him alive. For every pound a man weighs above his height, his system is at a disadvantage, and

he suffers in various ways. When fat is distributed about the body then no disadvantage is felt. But when fat is accumulated in particular parts of the body, interfering with the functions of particular organs, then its evil influences become speedily apparent. The most accurate account of the effects of accumulation of fat in the viscera of the body will be found in a pamphlet by Mr. Banting, who, though not at all what we should call a fat man, nevertheless, so suffered from the chest that he could not walk forward, climb stairs, or stoop to buckle his shoe. There is no doubt that in his case there was a need for immediate relief, and he obtained it by abstaining from articles of food which supply fat to the system.

When persons weigh much above the standard height, it is obviously a matter of importance that they should as much as possible relieve the tax put upon their muscular and circulatory system by diminishing their weight. Naturally, this is not a very difficult thing to do, but it should be done with caution. To succeed with success requires caution. The immediate withdrawal of all fatty food, and the substitution of such as starch and sugar, which produce less fat, frequently attended with dangerous results. Mr. Banting's diet, although so beneficial in his case, was not altogether a judicious one, and we have no doubt that many of our "stout" friends have found an early grave by their determination to reduce themselves to the standard weight for their height. With regard to women, or those who weigh more than the standard height, it should be recollected that if they have suffered no inconvenience from their weight, it is better to leave well alone. There are few people living in the scientific circles of any city who are not well acquainted with portly forms and genial faces of well known men from seventy to eighty years of age. It would be folly on the part of the men who have thus achieved the normal age of three-score and ten years to commence any system of artificial diet, when their natural instincts have guided them in spite of their weight, to their present green old age.

When studied from a judicious point of view, there is no doubt that an estimate of the height and weight of an individual ought to enter into an estimate of the possible chances of life. In medical practice it may become the deciding point of the treatment of disease; while in the estimates which insurance offices are obliged to make of the prospective value of life, it is of the utmost importance.

STUDIES IN HYGIENE.

SOCIETY FOR PROMOTING THE SPREAD OF MEDICAL KNOWLEDGE.—A few friends to a Reform, in New Haven, Conn., feeling they could do and get good, proposed to meet together from time to time at one another's, to talk over, in an informal way, some subjects of vital importance to all, though not by most—Health, and all that pertains to it.

Weak and feeble beginning, they have their numbers increasing so rapidly, that it might best to organize into a society, and accordingly done, and President, President, Secretary, Reader, and a Committee of Topics for Discussion and General Business were chosen.

It seemed best not to make our meetings frequent at present, but we presume the rapid increase in persons attending them will demand a little time; for we find that with a very trifling amount of work, our numbers are easily rapidly augmented. They are quite infrequent at present; we meet but once a fortnight on Friday evenings—dispatching the business on 7½ and 9, then tarrying a little for a chat, to make our acquaintances more solid and our friendships stronger. At each meeting the subject for the next is announced, and one appointed to read an essay or talk upon the subject sufficiently long to break the ice and suggestive to others. Then the President draws from each one present some facts by way of experience or observation. Truly all have something to say, and are glad to say it, for each one is expected to contribute to the subject and to come prepared. We bring books with articles on the subject in which are put into the hands of our excellent Reader, so that all have the benefit of the read. Need I say that, although we are beginners and do things crudely, our meetings are very interesting and profitable?

Our next meeting, one of our leading physicians of New Haven, is to read an original paper before the Society on the "Relations between States of the Mind with States of the Body, and the Dependence of each upon each." The subjects to be discussed may be numbered legion. There is no danger of our dying.

Our only drawback is, too little time. True, our Society is honored by the presence

of ladies. We could not get along without them. They take a more active part than men, and why should they not; this subject appeals to them far more strongly than to any others. Already a Health Library, and Health Tracts are subjects for consideration. One evening, one of themselves suggested that it would be well if all would provide themselves with Health magazines, and all subscribed at once for *THE HERALD OF HEALTH*.

Who can predict the good results of these meetings, or to what they may not lead in time! Certainly the success of this movement will lead to similar societies being formed in other communities.

W.

[NOTE.—We look upon this movement as a very wise one. Are there not other towns and cities where the people can form similar societies for promoting the spread of a knowledge of health, and the best ways of living? We should be glad to chronicle the doings of such societies everywhere.—EDITOR.]

ABUSES OF DRESS.—The tight waists, the low necks to dresses, and the high-heeled shoes are most flagrant abuses, and ought not to be longer tolerated. We shall not quarrel with the jaunty little hats of the ladies; for they are indeed pretty, and no harm results from them, as of all parts of the body the head needs the least clothing. But, to pass to the other extremity, we have to say that the detestable high heels to ladies' boots and shoes, running as they do, down almost to a point, are spoiling the gait and ruining the ankle-joints of children and young misses. We are careful to order our shoemakers to remove such heels from shoes before permitting them to be brought into our dwelling. Heels of moderate height and good breadth are of great service in elevating the feet so as to avoid direct contact with moist earth, and they also give support and afford firmness to the step. Why should Fashion push good devices to absurd extremes? We must aid in dethroning the tyrant when her decrees lead to the physical or moral injury of the race. The present fashion of leaving the neck and the upper part of the chest bare, is fraught with evil consequences. It would be less objectionable in countries uniformly warm; but that our daughters, here in this frigid and changeable climate, should constantly expose to chilling

winds a vital part of the body, is one of the evils of fashion which should be discountenanced by every mother, and father, and brother.—*Nichol's Journal of Chemistry.*

Regarding shoes we will add that the common practice of buying those already made is very bad in its effects on feet. Shoes should always be made for each foot on a last made for them. Let any one who is used to wearing shop shoes wear a pair made on an anatomical last, and they will for the first time enjoy the luxury of happy feet! We say happy, for the feet are quite as susceptible of happiness as any part of the body.

THE COATING OF THE TONGUE.—In health the tongue has hardly a discernible lining; disease quickly gives it one. In inflammation of the respiratory textures at the commencement of fevers, in disorders of large portions of the abdominal mucous tract, the epithelium accumulates, and the tongue has a loaded, whitish appearance. The coat is apt to be yellowish in disturbances of the liver, and of a brown or very dark hue when the blood is contaminated. But we must be very sure, in drawing our inferences, that the abnormal aspect be not due to the food partaken of, or to medicine. Its color is also modified by the character of the occupation. Thus, as Chambers asserts, there is a curious, smooth orange-tinted coating on the tongue of tea-tasters. A local cause sometimes gives rise to a thick opaque coat. For instance, decayed teeth may produce a yellow sheathing on one side. Affections of the fauces also occasion a deep yellow hue. Again, some persons, wake up every morning with their tongues covered at the back with a heavy coating, which wears off during the day.—*Dr. J. M. Da Costa.*

PHYSICAL CAPITAL FOR CHILDREN.—Every hour that a child sleeps is just so much investment of physical capital for years to come. Every hour after dark that a child is awake is so much capital withdrawn. Every hour that a child lives a quiet, tranquil, joyous life of such sort as kittens live on hearths, squirrels in sunshine, is just so much investment in strength and steadiness and growth of the nervous system. Every hour that a child lives a life of excited brain-working, either in a school-room or in a ball-room, is just so much taken away from the reserved force which enables nerves to triumph through the sorrows, through the labors, through the diseases of later life. Every mouthful of wholesome food that a child eats, at

reasonable hours, may be said to tell on moment of his whole life, no matter how it may be. Victor Hugo, the benevolent, has found out that to be well fed once in days for one meal has been enough to transform the apparent health of all the poor child of Guernsey. Who shall say that to take seven days, or even once in thirty days, a wholesome supper of chicken salad and pagne may not leave as lasting effects on constitution of a child?—*Independent.*

Not only is sleep necessary for children they should retire early. Sleep taken early at night is worth more than that taken late in morning, besides early to bed is apt to be followed by early to rise, and this habit formed is of value all through life.

NEAR-SIGHTEDNESS.—At least in the classes of society, the possibility of blindness or near middle life, from changes incident to excessive near-sightedness, as well as the disposition to transmit the same infirmities to liabilities, ought to be taken into account in forming matrimonial alliances, like any impending disability from incurable ailment. The fact of its being frequently inherited, understood, parents should watch for any manifestations of its presence in their child and take measures to prevent its progressive increase. Teachers should impose upon near-sighted eyes as little as possible of studies requiring close application, even though at the time the child makes no complaint. It is questionable if our system of education, augmented as it does the frequency and degree of near-sightedness, is an advance in civilization. It would be better to go back at once to the teachings of the schools of Athens, than to persist in creating our favorite type of educated men and women, at the expense of their own and their children's eyesight.—*Dr. H. W. Willard.*

MAN'S FEET vs. BEAR'S FEET.—Man's foot is called a plantigrade foot; that is, a foot which has the whole sole flat upon the earth. There is one other beast—and a very respectable one in his way, which has also a plantigrade foot, and that is the bear; but the bear's foot and method of using it differ from man's, and his method of using it, in this respect—that whereas as we walk we strike first the heel, and then roll forward upon the toe of each foot alternately, the bear lifts the whole of the foot together and puts it down flat, in precisely the same way that a negro clog-dancer does. The bear has not the power to put down his be-

as and then roll forward and give a spring as it does, but it puts it down flat, as any one of us could if we had a wooden leg. So that there is a difference both in the structure and method of using this very useful member.—*Professor Fidler.*

EXCESSIVE LONGEVITY.—Here's the old man again, 143 years old this time, and living in the North Carolina mountains. The Tartarographer Linian says that at the time of Braddock's defeat he was twenty years old, and had a wife and three children. He has always been in moderate circumstances; lived upon a coarse, palatable diet; never drank any liquid but spring water, and bids fair to live many years longer. He has survived seven wives, having lost his last one about sixty years ago, he now begins to feel quite lonely, and wishes to marry again.—*Es.*

The above story is going the rounds of the papers and may be true, but if so it is a case of excessive longevity, of which there are few cases on record. A majority of the race die too soon, perhaps one in a million of all born lives too long. The subject of excessive longevity will be carefully treated in the papers on this subject now being published in **THE HERALD OF HEALTH.**

PRECOCIOUS CHILDREN.—Experience has demonstrated that of any number of children of equal intellectual power, those who receive no particular care in childhood, and who do not learn to read and write until the constitution begins to be consolidated, but who enjoy the benefit of a good physical education, very soon surpass in their studies those who commence earlier, and read numerous books when very young. The mind ought never to be cultivated at the expense of the body; and physical education ought not to precede that of the intellect, and then proceed simultaneously with it, without cultivating one faculty to the neglect of others; for health is the base, and instruction the ornament of education.—*Spurzheim.*

A precocious child should not be taught to read before it is eight years old, and greater care should be taken to develop its body than brain. There are thousands of children born with a tendency to excessive development of the nervous system, who, if they could have physical development instead of mental during the years of growth, would make our brightest and best citizens. Stimulate their brains in youth, and they break down and die.

EXTINCT FAMILIES.—What has become of the children of all the extinct royal houses? If we suppose two children to every man, we get a geometrical progression in the number of their descendants. Taking the Carlovigian dynasty, for example, the last two sons found an asylum in Germany. Each of these may have been the father of thirty generations; and there might be now, had not wars and famine interposed, upward of a thousand millions—as any one may calculate—of lineal descendants of the last Carlovigian king. In other words, under peaceful conditions, it would take a single pair only thirty-one generations, or less than a thousand years, to people the whole world as it is now peopled. Of course all these calculations are upset by war, famine, pestilence, and ignorance of hygiene. Still, with all deductions, is it not obvious that the blood of any given man must, after many generations, be flowing in the veins of millions of people?—*Harper's Weekly.*

A better knowledge of the laws of marriage, and of hygiene would save many a family from becoming extinct. It must be a sad thought to look forward to the time when not a drop of the blood of any person shall course in any human vein, still Heaven often decrees it. Would it not be well for people to think of this matter more? To found a family that shall be a power for good on the earth, ought to be a more frequent desire. Americans think too little of the future. They care too little for children, and too many families are childless from choice. When age creeps on them, they will suffer sorrow and loneliness. A reasonable number of children is a desideratum in any well-ordered family.

MAKING MONEY.—A medical journal says, "Making money is in America the 'chief end of man,' as the Westminster catechism has it. Plenty of advisers are ready with their wise saws how it can be accomplished. We are one of them, and offer a saw quite as true and less trite than any of them, and it is this, Keep healthy. Living in the midst of a commercial mart, and in the thick of the desperate conflict for wealth, we may have seen many a hero in the fight lose all for want of health; lose it, perhaps, just at the moment when a month or two of work would have made a fortune."

Most of the successful men are healthy men, or were so at the time the foundation of their fortune was laid. To get rich requires health, and to keep and enjoy a fortune it is even more important.

RECIPES FOR WHOLESOME COOKING.

MOLDED FARINACEA.

No. 1. ARROWROOT.—Take four ounces of arrowroot; one quart of new milk; one small salt-spoonful of salt, and four ounces of white sugar. Set a pint and a half of milk on the fire, adding the sugar and salt; when boiling, put in the arrowroot, previously mixed till perfectly smooth, with half a pint of cold milk, and stir constantly till it has boiled three minutes; then add ten drops of almond-flavor, and pour it into a mold previously dipped in cold water.

No. 2. BARLEY.—Six ounces of Scotch barley; three pints and a half of water, and six ounces of sugar. Steep the barley twelve hours; drain it, and pour the water, boiling, upon it; stew quickly in the oven in an earthenware jar, covered, till perfectly soft, and all the water is absorbed; when about half enough, add the sugar, and six drops of the essence of lemon; pour it into a mold, and let it stand to set. When boiled quickly, the above quantity requires two hours and a half, and is a much better color than when it is longer in preparation.

No. 3. LENTILS.—Take three ounces of lentil flour; four ounces of sugar; six drops of almond-flavor, and one pint of water. Mix the flour with a little of the cold water; set the remainder on the fire, and when boiling, pour a little to the flour, and mix well; put it into the pan with the sugar, and stir the whole quickly over the fire fifteen minutes, adding the almond-flavor; pour it into a mold previously dipped in cold water; when cold, serve with preserved or stewed fruit.

No. 4. MOLDED RICE.—Take eight ounces of rice and one and a half pints of milk. Wash, and swell the rice in the milk, till the whole of the milk is absorbed and the rice thoroughly softened; then pressing it into a mold or basin for half an hour, with a weight upon it, serve it, turned out, with preserved or stewed fruit.

No. 5. GROUND RICE.—Take six ounces of ground rice; two ounces of loaf sugar; six drops of lemon-flavor, or three drops of almond-flavor, and one quart of water. Steep the rice in a little of the water, while the rest of the water is boiling; then add it to the boiling water with the sugar; boil twenty minutes, stirring it all the time; add the flavor; dip the mold into cold water; pour in the rice, and let it stand till cold, serving with stewed or preserved fruit.

No. 6. MOLDED SAGO.—Take five table-spoonfuls of sago; one-fourth pound of sugar, and eight drops of the essence of lemon. Steep the sago a quarter of an hour in half a pint of cold water. Pour on it one and a half pints of boiling water, and boil the whole in an earthen vessel in the oven about one hour, occasionally stirring it. Pour into molds or basins, and let it stand. When cold, turn it out, and serve with stewed fruit.

No. 7. SAGO WITH FRUIT.—Take four ounces of sago; half a pint of raspberry and red currant juice (strained), and six ounces of loaf sugar. Wash the sago and steep it one hour in cold water; strain off the

water; add the juice and boil gently a short time, stirring it occasionally, and adding the sugar; when clear pour it into a mold; let it stand twelve hours, and pour on a flat dish.

No. 8. SEMOLINA.—Five ounces of semolina, and one quart of milk. Pick and wash the semolina; mix it with a little of the cold milk; set the remainder of the milk on the fire, and, when boiling, put in the semolina; let it boil about twenty minutes; then pour it into a mold, previously dipped in cold water; let it remain twelve hours; turn it out of the mold, and serve with canned peaches.

No. 9. TAPIOCA.—Take three ounces of tapioca; two ounces of ground rice; one pint and a half of milk, and eight drops of almond-flavor. Wash the tapioca in water two or three times; mix with the ground rice; add half a pint of cold milk, and let it remain thirty minutes; then add the remainder of the milk, and simmer it half an hour, stirring well the whole time; add the almond-flavor, and pour it into a mold previously dipped in cold water.

No. 10. CRACKED WHEAT.—For a quart of the cracked grain have two quarts of water boiling in a smooth iron pot over a quick fire; stir in the wheat slowly; boil fast and stir constantly for the first half hour of cooking, or until it begins to thicken and "pop up;" then lift from the quick fire and place the pot where the wheat will cook slowly for an hour longer. Keep it covered closely, stir now and then, and be careful not to let it burn at the bottom.

Wheat cooked thus is much sweeter and richer than when left to soak and simmer for hours, as many think necessary. White wheat cooks the easiest. When ready to dish out, have your molds moistened with cold water, cover lightly, and set in a cool place. A handful of raisins added with the wheat is nice. Eat warm or cold, with milk and sugar.—*Lizzie R. Bronson.*

LEMON PIE AND GEMS.

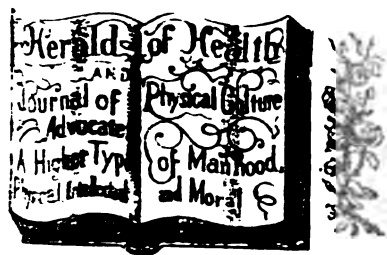
LEMON PIE.—Take one lemon, grated and squeezed; one cup vinegar; a table-spoonful of corn starch dissolved in cold water; then pour a cup of boiling water over it.

CAKE.—One part white flour, one part graham flour, one part corn-meal. Shorten it with butter or condensed milk, reduced one-third.

The above recipe for lemon pie is used in our Institution, and a majority of our guests will testify as to the excellence of lemon pie made in this way.

TO MAKE GEMS.—See that your oven is hot enough to bake potatoes, and that your small oblong iron or tin pans are hot, and greased with olive oil. Now mix wheat-meal or graham flour with cold water, or milk and water if preferred, to the consistency of corn-bread batter with the greatest possible rapidity, and put instantly into the pans, and bake twenty-five or thirty minutes. Success depends upon the speed of the whole process. Gems may be eaten while warm, but not while hot enough to melt butter.—*Lizzie R. Bronson.*

EDITORIAL DEPARTMENT.



NEW YORK, MARCH, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as indebted for every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing it to be doing this magazine will prove to be more useful and acceptable to its patrons.

Exchanges are at liberty to copy from this magazine giving due credit to THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

THE ENERGY OF OLD MEN.—VON OLTKE.—The word Energy means the power to work. One man, for instance, is sufficiently strong to do each day an amount of labor equal to lifting a certain number of tons of matter ten feet high, another half as many, and another twice as many tons. This power, whatever it is, is known among physiologists by the name of energy. We all, of necessity, live in a world of work. We must labor if we would eat, and we must work if we would live. We can not escape this condition of things, if we would, and it is very doubtful if we should care to avoid it otherwise if we could. We are usually proud of the possession of great power to do

work, not necessarily physical work, but work of some sort, and the man who can do twice as much as his fellows is looked up to and admired, courted, often worshiped. It is a royal thing to possess great strength, to be filled with power, to bubble over with surplus energy, so that every department of our being can be kept in full activity, during a reasonable number of hours each day. Children abound in energy. In proportion to their size, they possess more than grown people, but it can not with propriety be turned into work, as it is required to build up the body into full proportions. Hard work is not good for children; it dwarfs and stunts the body and brain. It kills the goose that lays the golden egg. As the body and mind mature, work may be increased, and usually from the age of thirty to fifty, or sixty, the amount of energy which can be spared for hard work is, in healthy persons, very considerable. It is not often that great power is retained much after fifty or sixty. Indeed, it is more likely that, at this age, the man or woman, if alive, is feeble, infirm, and tottering on the verge of the grave. A remarkable exception to this, is seen in Count Von Moltke, who is now the great military genius of Europe, if not of the world. This man is now over seventy years old; and the vigorous campaign which he has led, must have subjected him to greater physical and mental exertion than almost any living man of his age, or perhaps any other age, has ever had to endure. We know little of his life or history, but there can be no doubt of this, that he has not rudely wasted his strength, in any part of his life. It is altogether likely that his life has been one favorable to growth and development, both mental and physical, and that he has been able to lay up a reserve force of vital power with which to do his work now. Indeed, we know that the great General had not distinguished himself before sixty, or before the

Austrian and Prussian war of very recent date. It is a settled fact in physiology, that those who spend their vitality in hard work or dissipation in early life can not have it in old age. "You can not eat your cake and keep it too," said the mother to her boy. You can not be powerful at seventy if you are wasteful at thirty, is an equally trite saying.

It is a grand thing to be powerful when old. Those days when the grasshopper is a burden are hateful days, and it is wise to shun them. It is thought an absolute necessity for every young man to lay up something for a rainy day. To be old, and poor, and homeless is a hard lot, but is it not equally hard to be old and infirm, and rickety, and toothless, and decrepit? Would it not be wise for all to save some strength, as well as money, for old age? Then might old men, and old women, our grandfathers, and our grandmothers, be beautiful and sweet and blessed, instead of a burden to themselves and a care to others, as they often, though we are happy to say not always, are. We are privileged to know at least one aged couple whose lives are sweet and wholesome, a delight to themselves and others.

Might not the number of Von Moltkes, of strong and happy old men and women, be greatly increased, by a little more wisdom and thoughtfulness in early life?

RAILROAD HORRORS—A NEW FACULTY NEEDED.—It is seldom that the country is more shocked than at the terrible accident that occurred on the Hudson River Railroad at New Hamburg, near midnight, February 6. A Pacific express train dashing on at the rate of forty miles an hour runs on to an oil train, which, by accident, has been thrown on to the track, when in an instant several sleeping cars filled with passengers are set on fire, and the engine and a considerable part of the train are plunged into the river, and over twenty persons in good health are hurried into eternity. It is useless to discuss the question of blame in a case like this. To lock the door after a horse has been stolen may be well, but it does not bring back the

horse; to find fault with the Railroad Company after it has sent a score of our friends into eternity is natural, but it does not bring them to life again.

And this brings us to a question which may have more practical importance than would first sight appear. It hints at a faculty in the human mind not yet fully fledged, but growing to meet a demand of the time. We mean the faculty or power of prescience. Could a person about to take a journey know beforehand which train to take, he could always avoid accidents. Now, is such a thing possible? We do not say it is, but we do say that there are indications of such a faculty or power. There are a number of persons who intended to take the fatal train, but from some cause which they can not explain, did not. There were on the train a number of persons who went on board with the feeling that something terrible was to happen. The conductor of one of the sleeping-cars was one of these. Premonitions of this kind are not uncommon, and some of them are so remarkable as to leave no room for doubt, but that they are genuine cases of foresight rather than the vagaries of a diseased brain. We believe there is a great need of some such faculty in the mind, and that there are indications that one is slowly but gradually developing to meet this want. How else are people to avoid those horrible calamities which scatter havoc and destruction in their path? We would not foster the spirit of blind superstitious fear, but only a proper heeding of such premonitions of coming events as are reasonable and proper.

ANNOUNCEMENT.—We shall soon publish a new and interesting work on Minnesota and the climate for Consumptives, illustrated and beautifully bound. It will be a most valuable work for all with lung diseases, or who may be subject to them, showing the best places to get benefit and care. Its hints on hygiene in reference to this disease will alone be worth the cost. Sent postpaid for \$1 25. Orders may be sent in at once.

HAPPINESS—WHAT IT IS, AND WHAT IT IS NOT.—Plato declared happiness to consist in the contemplation of abstract ideas of beauty and excellence. This may be a good definition of the word, as understood by men with such minds as this great Philosopher had, but it will apply to but few persons. Indeed, nine-tenths of the race would be miserable in any such pursuit, or mental occupation. A young lady defined happiness to consist in the possession of a true and beautiful lover, and no doubt she spoke the truth so far as she could speak it, for her grandmother at seventy would give quite another definition. To her it would consist in the contemplation of a well-spent life, and the hope of joy in the world to come. The truth is, each individual will define happiness in his own way. One man finds it in the pursuit of wealth, another in the pursuit of culture, another in the possession of religion. The philanthropist finds it in doing good. The hungry man seeks it in food, the cold man in warmth and shelter, the man of poverty seeks it in wealth. Probably, however, perfect health is the fountain source of more happiness than any other. With a good digestion, a tough skin and a sound mind in a splendid body, who could not be happy? There are probably more happy men and women in the world than unhappy ones, more joy than sorrow.

Many people think they are unhappy when they are not. Real unhappiness can not exist without a cause. It is a shame and a disgrace to complain of being unhappy when we are only lazy and unoccupied. Such people are like the fox who had a deep wound somewhere on his body, but he could not tell where. Let them be ashamed to own it, unless they can show good reason.

Happiness consists in loving and being loved. There is enough to love in the world, but to be loved we must deserve it. We may be admired for our beauty or talent, courted for our influence or wealth, but we can only be loved as we are good. Therefore, happiness consists in goodness. The sacred writer had it right when he said, the Kingdom of Heaven is within you.

WASTE OF LIFE.—Some striking statistics of the fatality of scarlet fever are given in *The British Medical Journal*:

"During the twenty-one years, from 1848 to 1868, inclusive, there were registered in England and Wales, 415,982 deaths from scarlet fever and its allied disease, diphtheria. To bring this number down to the present time, exact data are not yet forthcoming, but it may be estimated that at least forty thousand deaths have occurred throughout England during the last year. In the six months ending June last, 13,900 deaths were returned as resulting from scarlet fever and diphtheria—a number, however, which we suspect to be rather under than over the mark. Here, then, we have an aggregate in round numbers of four hundred and seventy thousand persons who have fallen victims to one type of symtotic disease in the last twenty-one and a half years. But what of those whom the disease attacked but did not kill outright? On the most moderate assumption it is probable that at least five millions of persons in England have, during the last twenty-one and a half years, suffered more or less severely from attacks of scarlet fever and diphtheria. That a considerable number of these persons ultimately perished by other maladies, either induced by the original attack or supervening on a broken constitution, must undoubtedly be taken for granted."

Prof. T. H. Huxley, in his great lecture on the "Origin of Life," just delivered before the British Association, says, that in looking back no further than ten years, it is possible to select three years in which the deaths from scarlet fever alone have reached thirty thousand a year. This, too, leaves out of sight all who may have been maimed by the disease or the treatment, which would, perhaps, amount to as many more. The specific cause of scarlet fever is not known, though it may yet be discovered. Prof. Huxley intimates this when he remarks, "This long-suffered massacre of our innocents will come to an end." We need not, however, wait for the discovery of the specific cause of the disease before we do much to prevent the ravages

of the disease. The apathy of the people is so great on these subjects, that they allow they do not even use such preventive means as lie within their reach. We refer our readers to the able articles on this subject published in the volume for 1869.

NARROWNESS AND BLINDNESS.—Human nature is often full of generous, noble impulses. Men and women will brave peril and danger to save a life, which may perhaps not be worth half so much as their own. It is only a few years since expedition after expedition was sent out in search of Sir John Franklin. Large sums of money were expended, and many lives were jeopardized in a fruitless search, after a bold but unsuccessful navigator. None but the most selfish could fail to applaud every effort to discover the fate of one whose name was dear to all the civilized world. Noble impulses are common to all people. The wildest savage, whose greatest delight may be to tomahawk and scalp his white foe, often exhibits deeds of noble daring, of generous impulses, second to those of no living man. Does a woman or child fall overboard, how many brave, stalwart men are ever ready to plunge into the water and risk their own lives to save the life of another, to whom they may owe nothing. It is only the other day that the papers chronicled the fact that a man risked his life to save a child playing on the railroad track, unconscious of an approaching train that would in another instant have crushed it to death. Such instances are quite as common among the hard, rough, uncouth people as among the refined and gentle. But if there is much kindness and generosity among men everywhere, so is there also much narrowness and blindness. While all England was alive as to the whereabouts of Sir John Franklin and his men, and every inhabitant would have contributed his quota toward the expense of each search, had it been necessary, how many were broad and comprehensive enough to make any effort half so magnificent to improve the sanitary condition of the people, to stamp out scarlet fever, or to banish

poverty and intemperance. Suppose that the man who saved the child from destruction on the railroad track at the risk of his own life had been told that a hundred children were in danger of dying with scarlet fever for want of some precaution, which he could give without risking his life, though it might involve trouble and expense. Would he become excited over the matter and rouse himself and his neighbors to the rescue? Ten chances to one he would let the hundred perish without lifting a finger. And why? Not because he is not a noble, kind-hearted, generous man, but because he is a blind and narrow one. He can not be made to see the danger, and he can not understand the use of precaution. It is so in every department of life. Evils exist for which there are remedies, but only a few see them, or comprehend the cause and the case. What the world needs now is not so much brave, kind, generous men and women, of whom the world is full, but broad and comprehensive ones, who are not groping in the dark, but who live in the broad light of science, religion, and culture, and who are active enough to put into use their thoughts for human progress.

LOSS OF POWER.—The statement that so much power has been wasted for 48,000 years at Niagara Falls suggested to me the calculation how much is wasting every day at Hell-gate, in the East River, opposite New York. It turns out that we have more water-power wasted here than at Niagara Falls. That power is 16,000 times as great as that from all the coal burned upon the island to-day. There is more water-power in the rivers of every State in the Union than is used by the whole United States. To make use of the tidal power would give us the equivalent of a coal mine in the middle of Hell-gate. The power of the tide running to waste upon the coast of the United States is 4,000 billion times as great as the whole mechanical world is using to-day. We can not much longer afford to incur the monstrous expense of coal. There is no necessity for it. Coal will cease to be of value to us when we learn to

make use of the mightier power in the water and in the air, the only two materials God has given us enough of without our taxing our ingenuity and toiling in constant labor to make up the deficit.—*Edward Lester.*

We think it would be an interesting calculation to cipher out just how much power runs to waste in the population of any large city in a year. In New York we could show a large force going to waste every day. We will pay somebody handsomely to make the estimate. It is an important question to hygienists and physiologists.

YOUNG DOCTORS.—This season about fifteen hundred young doctors will be graduated from the medical colleges of this country. If we were to judge of the qualifications of these from those we see at Bellevue Hospital at the clinics that are daily held there, we should almost despair of the profession. Sorting out a dozen of the best of them, and the remainder are a dirty, ill-mannered, rowdyish set of fellows, or else a set of stupid knownothings, who will never do any good, but may do much harm before they die. The treatment they have given to women students who attend the clinics and lectures has been such as to indicate their own breeding better than any thing we could say. Galton, in his great work on Hereditary Genius, noticed in the February *HERALD OF HEALTH*, has estimated pretty accurately that in Great Britain there are only about two hundred and fifty persons to each million of adult males who ever become distinguished. If we were to apply this rule to the young men who attend the medical colleges, the hope of finding genius there would be small indeed. There ought to be more care exercised in the selection of medical students. Not every one who applies should be allowed to enter, but only such as by nature seem fitted for the work. The process applied at West Point to candidates for the military service, modified to suit the exigencies of the case, would weed out so much of the chaff of medical colleges, and give so much greater dignity to the profession, that it ought to be

adopted. Who will clean this great Augean stable of its worthless trash?

THE DEATH OF ALICE CARY.—We are greatly pained to chronicle the death of an esteemed friend and frequent contributor to *THE HERALD OF HEALTH*—Alice Cary. She had been in feeble health for some time, and though from the nature of her disease she suffered most excruciating pains, yet she bore it sweetly and patiently to the last. Her funeral was attended by a large concourse of literary friends who mourn her loss as the loss of the friend and sweet singer of pure and beautiful song. She worked till within a few days of her death. It is only a short time since she sent us a poem for *THE HERALD OF HEALTH*, which will be published in the next number. She led a beautiful life, and her name will be treasured in sacred memory by thousands of friends.

RAIN WATER—QUERY?—Is rain water as pure as spring or well water, and as fit to cook with? W.

ANSWER.—Rain water is always soft, but rarely pure and wholesome as it falls from the sky. In its fall through the air it absorbs much atmospheric air, carbonic acid, and salts of ammonia. Over large towns it brings down soot, sulphurous and sulphuric acids. Near the sea, it contains a little salt. Nearly all of these substances are removed by filtering.

HOW AN OLD MAN FEELS.—Anthony Pecour, who recently died at the age of 109 in Troy, New York, said a few days before his death that he felt as young as at fifty years of age. Up to the age of 107 he had never had a doctor. He attributes his health and extreme age to plenty of exercise and correct habits.

CHARACTERISTICS OF WHOLESOME WATER.—1. It should be transparent.

2. Nothing should settle to the bottom after it stands a few hours.

3. It should be devoid of smell or taste.

4. It should be well aerated and of such temperature as to render it neither flat, nor so cold but it can be drank in moderate quantity without injury.

WHISKY AND THE HERALD OF HEALTH.

—A glass of whisky is manufactured from a dozen grains of corn, the value of which is too small to be estimated. A glass of this mixture sells for a dime, and if of a good brand is considered well worth the money. It is drunk in a minute or two. It fires the brain, sharpens the appetite, deranges and weakens the physical system. On the same sideboard on which the deleterious beverage is served lies a copy of THE HERALD OF HEALTH. It is covered with half a million types; it brings good news regarding health and happiness, from all quarters of the globe. THE HERALD costs—little more than a glass of grog, the juice of a few grains of corn, but it is no less true, there is a large number of people who think corn-juice cheap and THE HERALD dear.

HOW WATER GETS FOUL.—1. The water which falls from the clouds becomes foul by falling through the smoky, dirty air, and by the matter from the roofs of houses on which it falls.

2. Spring and river water become foul by freshets.

3. Well water is contaminated by surface impurities, sewerage, cess-pools, and by the soil through which the source of supply is accumulated.

4. River water is spoiled for domestic uses by the refuse of slaughter-houses, gas-works, and the various manufactures that pour their refuse into it.

5. Cistern water gets filthy by the settling of such impurities as are washed from the roof; by leaks in the pipe, and by not being well covered.

It is now well established that dysentery, typhoid fever, cholera, etc., and other fatal diseases, are caused by animal and vegetable sub-

stances dissolved in the water, therefore supplies of water for drinking and culinary and bathing purposes should be carefully inspected. All wells should be well covered. No sewer should be near a well, and the wash of all accumulations of filth should be carefully prevented from being carried into any water-supply for the house. It is well to remember that we may get accustomed to drinking impure water and not know it, unless other senses than taste are consulted. A proper attention to the subject, and a determination to use only wholesome water, would not only prevent many diseases but often save the lives of some beloved member of the family.

DRUGGED LIQUOR.—A great deal is said about drugged liquor. If a man drinks intoxicating drinks and gets drunk, he is very apt to apologize for it by saying the liquor was drugged. But this is only a trick of the trade to avoid censure. Drugged liquor is probably little or no worse than that which is not drugged. They both belong to a class that have bad effects on the body and have no business in it. Drunkards who screen themselves from censure behind drugged liquor, are either very cowardly or very ignorant.

CHARACTER OF WATER WE MUST NOT DRINK.—1. Turbid water, or that which has taste and smell.

2. Water that leaves a sediment in the bottom of the dish.

3. Water that contains animal or vegetable water in solution.

4. Water that is very hard, brackish water, or that which has absorbed from the air poisonous gases.

AIR AND TEMPERATURE IN MINES.—The deepest mine in the world is a coal mine in Lancashire, England. It is nearly half a mile deep. The temperature in the solid stratum is $93\frac{1}{2}$ degrees, and where the air circulates 79 degrees. It is almost impossible to work in this mine, so great is the heat.

How to Treat the Sick.

HEALING ULCERS BY TRANSPLANTATION.

—There are certain ulcers and wounds of integument which, solely on account of their extent, have hitherto been considered incurable. To illustrate by an example: If the whole of the skin were stripped from the arm, no effort of nature or skill of surgery, however long continued, could ever succeed in restoring the tegumentary covering. At least such has been the statement until to-day, and for the following reasons. First, because new skin never forms except from the margins of the old; and second, new skin can never be projected from the old beyond a few inches, perhaps two or three at the most. But many examples are presented in surgery, in which the integument is destroyed by burns or by machinery to such an extent that repair, limited by these invariable laws, utterly fails to complete the restoration; and great deformity from contraction, a perpetual ulcer, or amputation, have been the only alternatives.

By a successful operation upon a patient at the Hospital of the Sisters of Charity in Buffalo, in 1854, I demonstrated that a comparatively small piece of skin, perhaps three inches square, taken from one leg and transplanted to an open ulcer upon the opposite leg, which was eight inches square, would, after becoming attached, grow, and increase in size by the projection of a new skin from its margins, until the whole ulcer was closed in. This operation has been repeated many times by myself and others since the date of my first experiment, and with similar results.

But please listen now to what Mr. Reverdin has done. He has taken a piece of skin not larger than a lentil-seed from the arm of a patient, and inserting it in the midst of the raw, granulating flesh of an ulcer, it has become the center from which new skin has been formed, and has extended on all sides, and by

making several of these minute insertions, the whole sore has speedily become cicatrized.

I have repeated these operations at the Charity Hospital already more than fifty times. My first patient refused to submit to the operation, fearing that the excision of the piece of skin would be painful; but having cut a small piece from my own arm, he permitted me to insert it into his open wound. This trivial operation, made in the presence of a large number of others suffering from chronic ulcers, gave them an assurance that it was almost painless and bloodless, and no further difficulty was experienced in prosecuting the experiments. We had but six successes from this large number of transplantations, but the principal causes of failure have been ascertained, and will be avoided hereafter.

What is most remarkable in this thing, is that the minute piece thus implanted seems to fall off in a few days, but at the point where it rested, after the lapse of a week or two more, a small white spot is seen coming into view, like a cloud in a clear sky. The original and parent structure disappears, but a cell or seed is found to have been deposited, capable of indefinite growth and development. The precise law which governs this curious process we do not pretend to have ascertained; but having discovered the fact and availed ourselves of it in the cure of our unfortunate patients, we can afford to wait for an explanation.—*Dr. Hamilton.*

IN-GROWING TOE NAILS.—This most painful of the diseases of the nails is caused by the improper manner of cutting the nail (generally of the great toe), and then wearing a narrow, badly-made shoe. The nail beginning to grow too long, and rather wide at the corners, is often trimmed around the corner, which gives temporary relief. But it then begins to grow wider in the side where it was cut off, and as the shoe presses the flesh against the corner,

the nail cuts more into the raw flesh, which becomes excessively tender and irritable. If this state continues long, the toe becomes more and more painful and ulcerated, and fungus (proud flesh), shoots up from the sorest points. Walking increases the suffering, till positive rest becomes indispensable.

TREATMENT.—We omit all modes of cutting out the nail by the root, and all other cutting or torturing operations. Begin the effort at cure by simple application to the tender part of a small quantity of perchloride of iron. It is found in drug stores in a fluid form, though sometimes in powder. There is immediately a moderate sensation of pain, constriction, or burning. In a few minutes the tender surface is felt to be dried up, tanned, or mummified, and it ceases to be painful. The patient, who before could not put his foot to the floor, now finds that he can walk upon it without pain. By permitting the hardened, wood-like flesh to remain for two or three weeks, it can easily be removed by soaking the foot in warm water. A new and healthy structure is found, firm and solid, below. If thereafter the nails be no more cut around the corners or sides, but always curved in across the front end, they will in future grow only straight forward; and by wearing a shoe of reasonably good size and shape, all further trouble will be avoided.—*Bostwick's Medical and Surgical Journal.*

CURE FOR RHEUMATISM.—One of our exchanges, *The Beekeepers' Journal*, prints the following remedy for rheumatism. "The man we speak of, suffered much from rheumatism in his right arm, so much so that he was not able to raise his arm to his head. Nevertheless he was compelled to perform some necessary operation on one of his stock of bees, and while doing so, was stung in the thumb of the rheumatic hand. Immediately the hand and arm commenced to swell, but as the swelling increased, the rheumatic pain diminished, and in half an hour, his rheumatism was gone.

A few months after this, being much exposed

to wet weather, the malady returned. He cured some bees and compelled them to sting him in the upper part of his hand, and in less than fifteen minutes he was free from the malady."

It is not at all unlikely that such a result would sometimes follow a bee-sting. We never starts the circulation through the affected parts will produce the same result.

VACCINATION AND CONTAGION DUE TO LIVING PARTICLES.—You are familiar with what happens in vaccination. A minute cut is made in the skin, and an infinitesimal quantity of vaccine matter is inserted into the wound. Within a certain time a vesicle appears in the place of the wound, and the fluid which distends this vesicle is vaccine matter, in quantity a hundred or a thousand fold that which was originally inserted. Now what has taken place in the course of this operation? Has the vaccine matter by its irritative property produced a new blister, the fluid of which has the same irritative property? Or does the vaccine matter contain living particles, which have grown and multiplied where they have been planted? The observations of M. Chauveau, extended and confirmed by Dr. Sanderson himself, appear to leave no doubt upon this head. Experiments similar in principle to those of Helmholtz on fermentation and putrefaction, have proved that the active element in the vaccine lymph is non-diffusible, and consists of minute particles not exceeding 1-20,000th of an inch in diameter which are made visible in the lymph by the microscope. Similar experiments have proved that two of the most destructive of epizootic diseases, sheep-pox and glanders, are also dependent for their existence and propagation upon extremely small living solid particles, to which the title of "microzymes" is applied. An animal suffering under either of these terrible diseases is a source of infection and contagion to others, for precisely the same reason as a tub of fermenting beer is capable of propagating its fermentation by "infection" or "contagion" to fresh wort. In both cases it is the

and living particles which are efficient; the quid in which they float, and at the expense of which they live, being altogether passive.—*Hesper.*

TO PREVENT SNORING.—Snoring comes mainly by breathing in sleep with the mouth open. Therefore the cure is, to sleep with the mouth shut. But, says one, how is the mouth to be kept shut, while we are sound asleep and do not know what we are about? We confess it is not easy to do this. Perseverance can accomplish a great deal, if the patient will try. Generally it will aid the sufferer to avoid sleeping on the back, a position in which the lower jaw naturally drops more or less, but to lie on the side or face. Sleeping in this position has many things to commend it, in our opinion. A Mr. Pinkard of New Orleans has patented a device to hold the mouth shut during sleep, but we do not believe it could be of more than temporary value.

REMEDIES FOR POISON BY IVY.—Olive (sweet) oil is said to be a sure cure for the effects of the Poison Ivy, or Poison Oak (*Rhus toxicodendron*). In severe cases it may be taken internally, as well as applied externally. Dose, two table-spoonfuls three times a day, keeping the affected parts well oiled all of the time. Anointing the exposed parts with the oil will prevent poisoning.

Take a handful of quick-lime, dissolve in water, let it stand a half-hour, then paint the poisoned parts with it. Three or four applications never fail to cure the most aggravated cases.—*Journal of Chemistry.*

CURE OF STAMMERING.—The effectual cure mainly depends upon the determination of the sufferer to carry out the following rule: Keep the teeth close together, and before attempting to speak, inspire deeply; then give time for quiet utterance, and after very slight practice the hesitation will be relieved. No spasmodic action of the lower jaw must be permitted to

separate the teeth when speaking. This plan regularly carried out for six months, cured me when twenty years old. I was painfully bad, both to myself and others. Without determination to follow out the plan, it is of no use attempting it.—*Exchange.*

PERSPECTS OF FEMALE DOCTORS.—While the conservative members of the profession are insisting that women are physical and mentally unfit for the study and practice of medicine, and must not be tolerated or acknowledged as regular practitioners, the incentives and facilities for the medical education of females are increasing notably in all directions, both in Europe and America. A wealthy citizen of Boston has lately bequeathed nearly a million and a half of dollars for the endowment of an institution for females—medicine being first named in the list of branches to be taught. If our good brothers in Philadelphia and elsewhere, members of the Pennsylvania State Society, and of the National Association and other organized bodies, who condemn as heretics all doctors in petticoats and their abettors, do not throw off their stiff stocks and suffer their heads to turn on the axis, they will run the risk of being crowded out of the profession by the well-trained graduates of crinoline, who are mustering in the latter days like the soldiers of Germany. The opponents of female doctors are really their best friends. They do not understand the nature of women or they would not attempt to thwart her aspirations by prescription. "When she will she will, you may depend on't."—*Pacific Med. and Surg. Journal.*

INEBRIATION HEREDITARY.—Dr. Turner, in his "Second Annual Report of the State Inebriate Asylum," states that out of fourteen hundred and six cases of delirium tremens which have come under his observation, nine hundred and eighty had an inebriate parent or grandparent, or both. He believes if the history of each patient's ancestors were known, it would be found that eight out of ten of them were free users of alcoholic drinks.—*Med. Record.*

Food for Mirth and Thought.

PERSONAL INDEPENDENCE.—Thus all things attest the nobleness of personal independence, and all things attest the need of it. Why, then, should we not devote ourselves to its culture? Is it a thing hopeless of attainment? Are we told that to judge what is right is no such easy matter? That very few are capable of doing it? That the attempt to do it would bring the uttermost confusion upon us? That the process would produce an abundant crop of conceit and impudence, a beautiful harvest of vagaries and whims, a hideous fruitage of intellectual abominations? Perhaps it would. To judge what is right is no easy matter; and the individual verdicts might, very possibly, clash together in a manner most deplorable. But the way to learn swimming is not to stand shivering on the bank of the pool. No dread of the plunge will answer the purpose of the dip and struggle. The proper way to judge wisely is to judge as wisely as you can. Would you have light, use the light you have. Consciences, like limbs, are made strong by using them. Self-reliance comes from relying on self, in the hope that self will presently become worth relying on.—*O. B. Frothingham.*

A KIND HEART.—It is kindly sympathy with human life that enables one to secure happiness. Pride is like an unsilvered glass through which all sights pass, leaving no impression. But sympathy, like a mirror, catches every thing that lives. The whole world makes pictures for a mirror-heart. The best of all is, that a kind heart and a keen eye are never within the sheriff's reach. He may sequester your goods. But he can not shut up the world or confiscate human life. As long as these are left, one may defy poverty, neglect of friends, and even, to a degree, misfortune and sickness, and still find hours brimful every day of innocent and nourishing enjoyment!

CHOKED TO DEATH.—In San Francisco recently, the sudden and unaccountable death of a boy ten years of age, led to the arrest of his father on suspicion; when, by chance, the physician who conducted the autopsy, after its completion, bethought himself to examine and remove the larynx, this organ was found to contain a large mass of meat, which produced death by suffocation. It appeared that the boy in the night had been awakened by an attack of vomiting, during which the meat became lodged in its position. *The Pacific Medical Journal* gives an account of another case also, in which a patient who was put under the influence of chloroform after having eaten a hearty meal, during an attack of vomiting lodged a portion of food in his larynx and was suffocated in spite of every effort.—*Buffalo Medical Journal.*

A SUCCESSFUL WOMAN FARMER.—A woman has carried off the \$500 prize offered for the best managed farm in Oxfordshire, England. English women take more interest in agriculture than their American sisters do. It does not however follow that the woman above referred to did any of the work on her farm; no doubt she employed a first class superintendent, as other English farmers do, and may not have had much to do in bringing about the result which won for her the prize.

REV. C. G. AMES, of California, has a wife who is a help-meet indeed, taking her husband's place in his pulpit in case of his sickness or absence. On a recent Sabbath she "got up in the morning, prepared breakfast, washed and dressed her baby, dressed her little daughter for Sabbath-school, put baby to sleep, and sat down and reviewed her sermon before time to take the cars for church; then, consigning baby to the loving care of his grandmother, she went to church and preached to the entire satisfaction of a large and critical audience."

WHAT SOME MEN AND WOMEN DO.—

Some men move through life as a band of music move down the street, flinging out pleasure on every side through the air to every one, far and near, that can listen. Some men fill the air with their presence and sweetness as orchards, in the October days, fill the air with the perfume of ripe fruit. Some women, cling to their own houses like the honeysuckle over the door, yet make it fill all the region with the subtle fragrance of their goodness. How great a bounty and a blessing is it so to hold the royal gifts of the soul that they shall be music to some, and assurance to others, and life to all! It would be no unworthy thing to live for, to make the power which we have within us the breath of other men's joy; to fill the atmosphere which they must stand in, with a brightness which they can not create for themselves.—*Becher.*

WHAT NOT TO LOSE.—I do say to

every young man whom I am now addressing, whatever your pursuits may be, however active, however absorbing, don't, unless you are willing to forfeit one of the most lasting of human enjoyments—don't, if you can possibly help it, allow yourself to lose your taste for reading. I say nothing of books as a mere substitute for and preventive of indulgence in low pleasure; you, I hope, are above wanting that sort of recommendation. But it is a bad thing to have the brain always filled with one's own narrow personal concerns, or what is one degree worse, with the small personal concerns of one's neighbors. I have not a word to utter against strenuous devotion to business while you are at it; on the contrary, that is the secret of success, and what is worth more than success—of self-approval.—*Lord Derby.*

WHAT IS A KINDERGARTEN?—For those

who do not know what the word Kindergarten implies, I will say Kindergarten means a garden for children, where the children are considered as the various plants, and the teacher as the gardener; who has to be intimately acquainted with their nature and needs, in order to supply all the necessary conditions of soil, moisture,

sunny-side or shade, that is necessary to promote their healthy growth and fruitage. At the same time Froebel wanted a garden connected with every school, so that the children should be in constant contact with nature, and be able to watch her processes, and learn to take care of plants, and also animals; which duty lovingly performed in early childhood, prepares the child, later in life, to take care of those dependent on him.—*Mad. Kriege.*

KINDNESS IN DROVERS.—Miss Burdett Coutts has been giving prizes to English drovers who have been merciful to their cattle, as a reward for their kindness to dumb animals on the way to the shambles.

It may be that drovers and butchers can be kind and tender, indeed they often are, but the tendency of their profession is toward cruelty and hardness. If as claimed by almost all naturalists and physiologists man must eat meat to live, then let us not complain that there are men cruel and hard enough to furnish it for us. It requires a nature somewhat cruel and harsh to follow such pursuits without pain to themselves for the pain they inflict on dumb animals.

For the benefit of young girls who are impatient to put on trained skirts, it may be stated that the Princess Beatrice, daughter of Queen Victoria, now nearly sixteen years old, has never yet worn any thing but short dresses even upon the grand occasion of a drawing-room reception, when court-trains are universal.

A DENTIST, trying in vain to extract a decayed tooth from a lady's mouth, gave up the task with this apology: "The fact is, madam, it is impossible for any thing bad to come from your mouth."

A TEMPTING ARGUMENT.—It is a plausible and tempting argument, to claim suffrage for woman on the ground that she is an angel; but I think it will prove wiser in the end, to claim it for her as being human.—*Higginson.*

WHY is a hobbling parson like a secular person? He is a lame man (layman).

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Torpidity of Liver and Constipation.—"What is your opinion of the use of white mustard seed as a remedy for obstinate constipation and torpid liver? I am subject to both, and have been induced to use the seed, and find that it affords considerable relief. I am fearful, however, that if its use was continued for any length of time, or until the bowels had become habituated to it, that they would not act without the customary stimulus if its use was suspended."

You are right. The effect is the same, except in degree, as other cathartic medicines. They all give temporary relief, but it is at the expense of a future aggravation of the same difficulty and a diminution of vital power. Free enemas of tepid water constitute the best means for temporary relief. To effect a cure, diet, exercise, bathing, etc., must be closely and perseveringly attended to. The food should be confined to fruit, vegetables, and farinaceous preparations, as graham bread, cracked wheat, oat, rye, or wheat meal mush or cakes, etc. If meats are used, only those which are lean and fresh. No fat or salted meats, gravies, soups, pies, puddings, cakes, fine-flour bread, greasy food of any kind, salt, spices, and condiments, milk, tea or coffee should be used. The patient should take as much exercise daily as he is able, and if it can be taken out of doors, so much the better. A loose dress about the waist, and abdominal breathing, in which there is an expansion and contraction of the abdomen at every breath, are very important. Kneading of the abdomen with the hands is useful, also percussion of liver and bowels. A regular hour for evacuations should be established as soon as possible, and every day when the hour arrives the effort should be made, whether successful or not. The patient should bathe at least once or twice per week, so as to keep the skin clean and in an active condition. Obstinate cases should go to some institution where they can get the full benefit of the Movement-cure treatment. It is as near a specific in such cases as any thing can

be, and when the cure is once effected patient can always stay cured with a reasonable attention to the laws of health.

Effect of Alcohol upon Longevity. "I know a man upwards of ninety years of age who has used alcoholic liquors freely ever since he was a young man. How do you account for the fact that he is still living, and in good health?"

There is once in a while a man who has such an "iron constitution" that he can indulge in excesses of one kind or another and still live to a good old age, but such cases are rare, and serve to show the endurance which some people are capable of. In such instances, however, it will generally be found that their other habits have been good, and conducive to health. That the use of spirituous liquors shortens life is a fact so generally admitted by all who have investigated the matter, that it seems almost useless to cite proof of the fact, yet the following extract from a pamphlet by Dr. Joseph Parrish, of Media, Penn., can not fail to prove interesting, as the facts therein stated are the result of careful investigations by the life insurance companies of this country and of Europe, to ascertain the influence of intemperance upon their risks:

"When, in a given number of risks, ten temperate persons die between the ages of fifteen and twenty, inclusive, eighteen intemperate persons die. When, in a given number of risks, ten temperate persons die between the ages of twenty-one and thirty, inclusive, fifty-one intemperate persons die, or the risk on an inebriate is more than five hundred per cent. greater than on a temperate person. When, in a given number of risks, ten temperate persons die between the ages of thirty-one and forty, inclusive, about forty intemperate persons die, or the risk is increased some four hundred per cent. Hence, insurance companies avoid risks on inebriates as they would on consumptives, or those suffering from Bright's disease, etc. These com-

gies have investigated this matter, not as philanthropists or reformers, but simply from a economic point of view.

The difference in the chances of duration of life between persons of sound constitution and those whose vigor is impaired by alcohol is as follows: A temperate person's chance of living is at 20, 44.2 years; at 30, 36.5 years; at 40, 28.8 years. An intemperate person's chance of living is at 20, 15.6 years; at 30, 12.5; at 40, 11.6."

About Fretting.—Fretting is one of the best, most unnecessary, unchristian, unreasonable, unprofitable, undignified, unpleasant, and useless things in the world. It never does any good, but always does harm to the person who frets, if to no one else. It is doing more harm to others as you would not have others do to you. Fretting is a habit, and may either be inherited or acquired. When it has been inherited it is much more difficult to overcome than when it has been acquired, but in either case the most strenuous efforts should be made to conquer it. Its effects upon the subject of it are to cramp and belittle the mind, disease the body, and augment every sorrow and diminish every joy of life. It is a powerful producing cause of dyspepsia and nervousness, with their numberless variations and complications, and is sure to make worse any disease from which the person may be suffering. Patients who are continually fretting and worrying about some real or imaginary trouble, are very difficult to treat with any degree of satisfaction or success. Of two invalids suffering from the same disease, and those general conditions, strength of constitution, course of treatment, etc., are similar, the one who is cheerful, hopeful, and always looking on the bright side of things will recover in less than half the time required by the confirmed fretter, and if the disease is a dangerous one the chances are ten to one in favor of the former. Fretting is a habit, and can be broken up as other habits can, but the subject of it must do the greater part of the work. He or she must first be convinced of the folly, uselessness, and sin of the thing, and fully determine to conquer the detestable habit, and then whenever any thing irritating occurs, **KEEP THE MOUTH SHUT**, and think of the folly and sin of giving way to the fretting pro-

clivities until the irritated feeling has ceased. The persons coming most nearly in contact with the victims of this habit can do a great deal to aid them in overcoming it by kind and encouraging words, and by carefully refraining from saying or doing any thing likely to induce the feeling of fretfulness.

Chapped Hands and Lips.—"I am greatly troubled during cold weather with chapped hands and lips. How shall I find relief?"

Persons with a languid circulation, relaxed condition of tissues, and impure blood, are most liable to be afflicted. This being the case, to effect a cure it is evident that these predisposing conditions must first be remedied. Consequently all the resources of Hygiene should be employed to purify the blood, equalize and strengthen the circulation, and invigorate the muscular and other tissues of the system. One of the best local applications is glycerine, which may be applied in small quantities several times a day, and should be **THOROUGHLY RUBBED IN**. It serves to keep the affected parts soft and pliable, and to protect them from the air. Gloves lined with wool are good to protect the hands from the cold.

Ripe Fruit and Cold Water.—"Can a nursing mother eat ripe fruit of all kinds, and drink cold water?"

She can and should. Ripe fruit is one of the best articles of food, and cold water the best and only drink needed. The fruit should not be eaten between meals, but as a part of the regular meal. It should always be thoroughly masticated. Cold water should not be drunk at meals, or soon after eating, as it retards digestion. The prevalent idea that nursing mothers must be fed upon warm slops is a fallacious one, and the practice is injurious to both mother and child, and should never be adopted.

Copper Cooking Utensils.—Copper and brass vessels should not be used for cooking purposes, as poisonous chemical substances are liable to be formed by the action of oils and acids upon the substance of the vessels. The use of such vessels for cooking fruit is especially dangerous, as the acids of fruit act readily upon the metal, forming very poisonous substances.

NOTICES OF NEW PUBLICATIONS.

NATURE'S ARISTOCRACY, Etc. By Miss Jennie Collins. Boston: Lee & Shepard.

A pretentious title to a book of platitudes. It is evidently written to subserve the purposes of the working people, and has its point of value; but, if the picture here given of the manners of the ladies of Boston is a true one, they are the most exacting, petty, ill-bred class of women in the country; we hope for the honor of the sex, that the views proceed from a prejudiced and narrow observation, and have no foundation in facts.

MODERN WOMEN, and What is Said of Them.

A Reprint of a series of articles in The Saturday Review. Second Series. New York: J. S. Badfield.

An English reprint consisting of essays upon various characteristics supposed to adhere to the modern woman. They are evidently the product of the masculine brain—trenchant, observant, and with a hit upon the nail-head good to witness. More keen than just, more witty than humorous, they provoke thought, and are well worth perusal.

THE TEMPERANCE ALPHABET. With Original Designs. By Edward Carswell. New York: National Temperance Society.

Mr. Carswell in preparing this little work has put all the children under obligations to him. Each letter of the alphabet is printed in red, two on a page, with appropriate designs accompanying, and a line underneath to tell the story. We know of several little boys and girls who have enjoyed Mr. Carswell's books and we hope learned a useful lesson as well.

JOHN SWIG; or, The Effect of Jones's Argument. By Edward Carswell. New York: National Temperance Society.

This little illustrated book which is written in verse can be read in a quarter of an hour is one of the latest published by the Temperance Society. We should like to see a copy of it put into the hands of all who are licensed to sell wine and spirituous liquors. It would do them good.

DOUBLE PLAY; or, How Joe Hardy chose

Friends. By William Everett. Boston: Lee & Shepard.

This a well written story for boys. The character of Frank Easton is one admirable for boyish study. The incidents are natural, and the moral and religious tone healthy, manly, and pious. We would cheerfully put it into a boy's hands.

LETTERS EVERYWHERE; or, Stories and Rhymes

for Children. By Theophile Schuler. Illustrated by Boston: Lee & Shepard.

These stories seem to be a collection from a foreign source, and are pleasing and instructive. We have tried them upon little folks, and found they "took" well.

WHAT IS SAID OF THE HERALD OF HEALTH

—An exchange says, "It is by far the best semi-scientific magazine published, for the use of intelligent and cultivated people. In it are presented all the best and richest results of science, in such a form that any well educated person can fully understand and enjoy them; and its literary character is of the highest."

THE PUBLISHERS' DEPARTMENT.

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THE EDITOR.

A Good Sewing Machine is given free for a club of 30 subscribers and \$60. This premium is very popular. If there is a poor, deserving family in your neighborhood help it to get a good sewing machine by subscribing at once. Perhaps your minister's wife wants one. If so, help her to get it, by helping her to get up a club. The Empire is one of the best sewing machines in use, and we are sure that it will give you good satisfaction.

Facts for the Ladies.—Ten years ago

I purchased a Wheeler & Wilson Sewing Machine, and have had it in constant use in my family since. We used it during the war to make clothing for our volunteers in the service, and for the hospitals, and this work was very heavy, being coarse woollen, and cotton fabrics. It is still in good working order, nothing having been broken but a few needles. You are welcome to use my name in your recommendations.

MRS. HUGH McCULLOCH,
Wife of Secretary U. S. Treasury.

I have in my family a Wheeler & Wilson Sewing Machine, that has been in almost daily use for the past ten (10) years, and not a thing has ever been done to it the way of repairing; not a screw loose, or any part of it out of order in all that time. It has been used in making coats, vests and pants, of the thickest woollen goods, besides doing all kinds of family sewing, and is now, this day, the best machine for work I ever saw.

OLD SAYBROOK, Conn.

GILBERT PRATT.

Notice to Our Correspondents.—The following hints to correspondents should be observed in writing to us :

1. ALWAYS attach name, Post Office, County, and State to your letter.

2. SEND MONEY by Check on New York, or by Postoffice Money Order. If this is impossible, inclose Bills and Postal Letter.

3. CANADA AND NEW YORK CITY SUBSCRIBERS should send *Money extra*, with which to prepay postage on subscriptions to THE HERALD OF HEALTH.

4. FURNISH, if you are entitled to a Premium, to order when you send the Club, and inform us how it is to be sent.

5. REMEMBER THAT WE NOW GIVE the *Empire Sewing Machine* as a premium. It is guaranteed to give good satisfaction.

6. PREMIERES TO SEND in Clubs early.

7. REMEMBER TO LOOK at our Premium List and Book List, and see exactly what we give and have for sale.

8. REMEMBER that for the names and addresses of 25 persons, either invalids or friends of Temperance and Health Reform, we give Prof. Wilson's book on the Turkish Bath. It contains 72 pages.

9. STAMPS should be sent to prepay postage on letters that require an answer.

10. Those who want a good *Spirander*, *Parlor Gymnasium*, or *Pillar* for making their water clean, will find the prices in another column.

11. INVALIDS from all parts of the country are invited to write to us for our circular, and full particulars as to Treatment or Board in the Hygienic Institution, see advertisement elsewhere.

12. See List of Books elsewhere.

Caution.—Our friends in writing to us will please be very particular and give Postoffice, County and State with every letter, and not depend on us to remember where they live, though they may have told us a hundred times. Those who think we can turn to our books and find their names and address without trouble, are quite mistaken.

The Address Label.—By this method our subscribers can keep their own accounts as to when their term of subscription close; for instance, if the printed slip has "De71," or "Je72" added to the name, it signifies that the subscriber's term of subscription expires with the December number of 1871, or the June number of 1872, and so on *et seq.*

Books C. O. D.—Parties who order books will find it cheaper to send the money with the order, than to order C. O. D., as in this case the cost of collection will be added to the bill. This is considerable, when the money has to be returned from a distant point. Those who order C. O. D., should send one-fourth the value of the order in advance to insure prompt attention.

Home Treatment.—Invalids wishing prescriptions for home treatment can have them for Five Dollars. They should send full particulars of their cases. Any person sending five new subscribers to THE HERALD OF HEALTH and Ten Dollars, will, if he does not choose other premiums, be entitled to a prescription for treatment free.

Our Premiums.—We shall be careful to send out as Premiums nothing which is not all that we claim for it in value. No cheap, second-hand, or indifferent article will be used.

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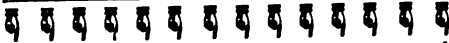
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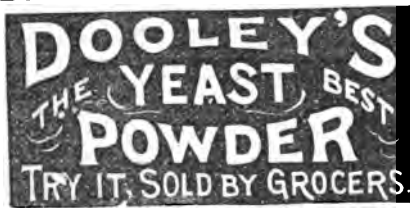
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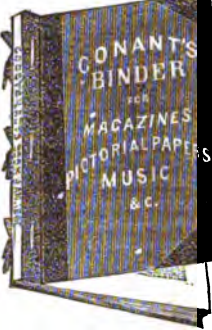
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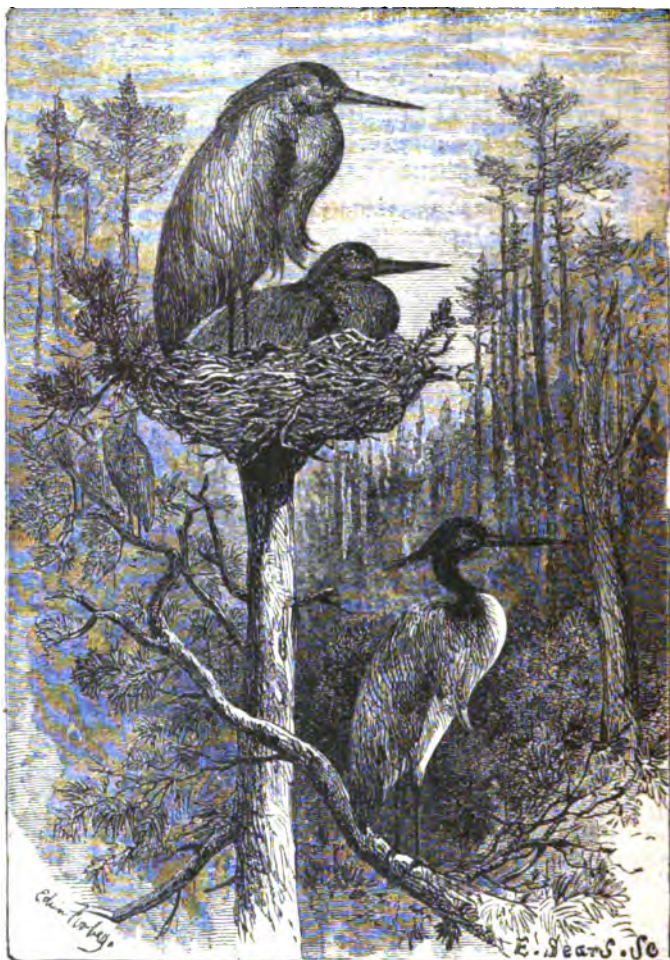
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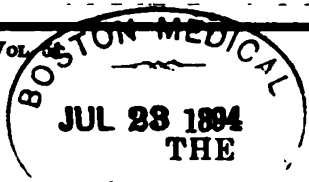
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CONTENTS FOR APRIL, 1871.

GENERAL ARTICLES :		Page	EDITORIAL DEPARTMENT :	
Alcoholic Medication—	P. H. Hayes, M.D.	146	Weeding Out the Cowards.....	177
Lord Bacon's Statements on Longevity	—E. Ray Lankester, B. A.	148	The Oldest Doctor in America.....	178
Boys, and What to Do with Them—	Mrs. R. V. Darwin	151	A Wholesome Family—Does it Pay to	
To Any Desponding Genius (A Poem)	—Alice Cary	152	be Sick?—Ministers' Salaries.....	179
Country and City Life—C. H. Brigham		153	College Dormitories and the Health of	
On Not Doing What You Like—Perkins		158	Students—Mixing with Strangers... 180	
Dust and Disease (A Poem).....		159	Does Suffering Make People Better?—	
Personal Influence—Henry W. Beecher.		161	No Colds on Mount Washington, etc.	181
The Education of Our Daughters—Mrs.				
R. B. Gleason, M. D.		163	HOW TO TREAT THE SICK :	
The Physique of Kaffirs.....		166	Treatment of Scarlet Fever.....	182
That Great Cure-all, Righteousness...		168	A Cure for Every Drunkard—Cure of	
Theories Put in Practice, or Diary of a			Erysipelas.....	183
Physician's Wife—Mrs. H. C. Birdsall		169	ANSWERS TO CORRESPONDENTS :	
How to Prepare Cow's Milk for Babies.		172	How to Prevent Spring Sickness—Lead	
Studies in Hygiene.....		174	Water-Pipes—Fruit in the Evening.	184
Recipes for Wholesome Cooking.....		176	How to Give Children an Appetite—	
			Sleeplessness—Tropical Fruits, etc..	185

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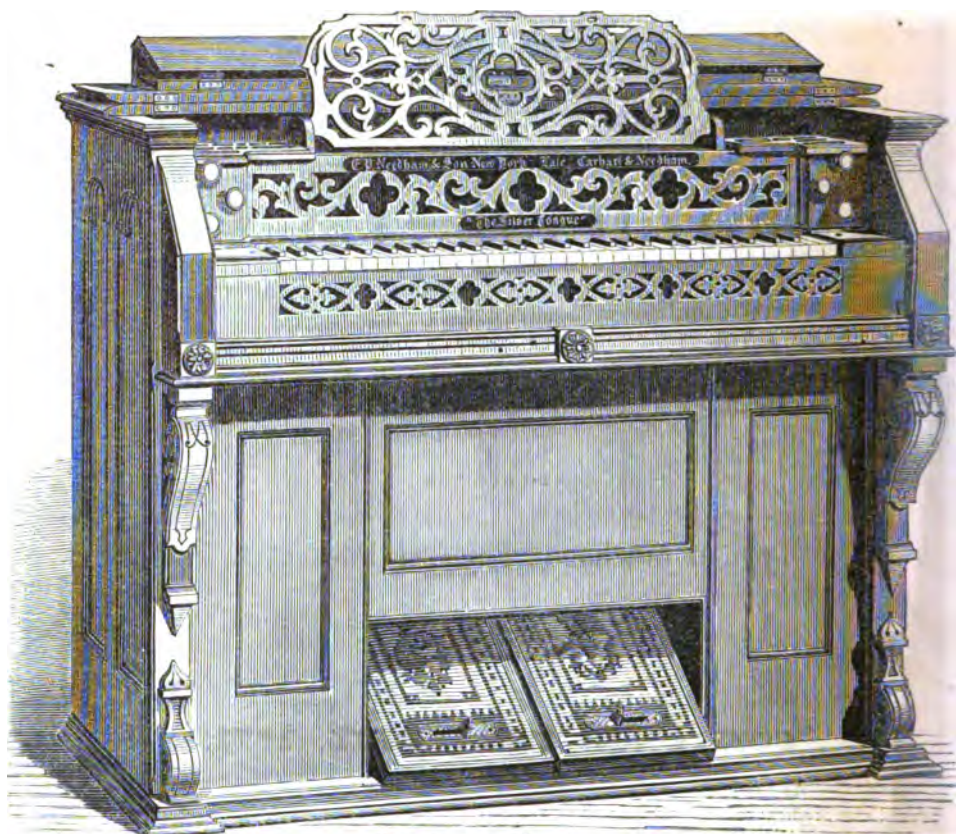
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COMPRISED IN A SERIES OF TWELVE ESSAYS CONTRIBUTED BY OUR BEST THINKERS AND WRITERS.

No. VI.—ALCOHOLIC MEDICATION.

BY P. H. HAYES, M. D.

ALCOHOLIC stimulants first exalt, then impair, depress, partially *paralyze* the powers and actions of life. Ordinary medicinal doses, at first brighten the eye, flush the face, increase the action of the heart, and give a general feeling of warmth and cheer to mind and body. The second effects of the same doses are: dimness of the eye, pallor of the face, tremors, palpitation, weak and irregular pulse, and a general feeling of bodily and mental exhaustion. The first effects are short, lasting at most but a few hours; the second are long in comparison, lasting many hours, or even days. The first or primary effects are an effort to raise the tides of life and feeling above where simple nutrition can sustain them, and in this effort nervous force is rapidly spent, at the expense of the powers of life, of which the secondary and remote effects, the exhaustion, irritation, languor, and melancholy—all of them shades of *paralysis*—are at once the consequences and the proof.

Physicians give these stimulants for their primary, exalting, or toning effects only. But the doses repeated, these effects grow shorter

and weaker, and tend to disappear entirely, while the secondary and more remote effects deepen and strengthen, until they triumph over the primary, and break down the constitutional health. It is almost incredible, that the vast amount of dosing with alcoholic stimulants can only secure transiently the ends sought after, while it must end in producing, in a more permanent form, substantially the very same conditions of debility it was given to cure.

But, say authorities, you must give the brandy in small and repeated doses *only*, that is to say, in *stimulating* doses only, and so avoid these secondary and disastrous effects. Is there such a thing as *stimulating* doses *only*?

Can alcoholic stimulants, by any possible mode of administration, produce perpetual exaltation? Are not first effects really a vital wrestling against the presence of alcohol, and the secondary effects the lapse of nature after the struggle? Could a dose which left no secondary effect, if such a dose were possible, answer the intention of the dose, and satisfy either physician or patient?

It is not many years ago that an epidemic brought into Bellevue Hospital, in the city of New York, a great number of cases of typhus fever. Now if there be one disease which, first of all, the advocates for alcoholic medication will name, and the books, too, as the very crisis of necessity for their use, it is the turning point of low fevers. But what says the Doctor in charge at Bellevue? "We gave brandy to hold up the pulse, following the direction of Dr. Stokes, to begin when the first sound of the heart was almost gone; and so we did, and we went on trying to hold up the pulse, until twenty ounces of brandy, and even much more was given to single cases in a single day. But we found, after the fever had run a certain time that we could not control the pulse in this way, and then we stood by and gave the brandy 'on principle.'" Just at this time, and when *one in five* of these patients were dying, the Doctor ordered every patient removed to the "Island," and placed under tents. And he says, "I determined not a drop of stimulants should go into those tents." Scarcely, however, were his patients established in their tents, before his associate came to him and said, "Doctor, many of our patients are in a state of *coma*, and if we don't stimulate them they will die." But the Doctor was true to his determination, and I have heard him declare that, here, with *fresh air*, and *without stimulants*, they got the *best record ever shown*, only *one in sixteen* of these patients died.

"Stimulating doses only?" Mark it! When these doctors found they could hold up the pulse no longer with the brandy, just there was the point where the worn-out powers of life could not be stimulated any more, and the depressing and paralyzing effects of the brandy were all they could get. Even then they stood by and gave it "on principle," which means, I take it, that they gave it because it is custom, precedent, or according to the books.

Mark it! Many of these cases were in the full narcosis—"coma"—of alcoholism, when they reached the "Island," of which "*fresh air*" cured them.

Mark it! any alcoholic stimulant you choose to give, in repeated medicinal doses, in acute or chronic diseases, will end at last in causing the very forms of constitutional disturbance and failure it is given to cure, and one may stand by and give it "on principle," only to see their patient sink into yet deeper exhaustion.

Alcoholic stimulants in low fevers? I would rather manage the fevers than the alcohol!

I wonder how soon the time will come when

doctors will find out how sure a poison alcohol truly is, as they are just now beginning to find out of their old friend, opium, since the discovery of its galloping rival, the hydrate of chloral; or, as Dr. Handfield Jones, who after treating nearly forty cases of *pneumonia* with *tartar emetic*, and then as many more without it, naively declared he never knew what a poison *tartar emetic* was before.

No fact is better established than that alcoholic stimulants greatly impair and finally destroy the glandular system. The stomach, the strongest of all the organs of the body, resists their action better than the liver, yet even here inflammation, thickening, and discoloration of the mucous membrane, and great loss of gastric gland secretions takes place, with, of course, greatly impaired digestion. But a man's foundation is in his digestion, and as the foundation fails so fails the man. The liver, only a step from the stomach, in the route of the portal circulation, gets the alcohol only slightly diluted, and here it inflames, contracts, and deforms this organ, and wastes and destroys that very part of it which secretes or separates the *bile* from the blood. The same change takes place in the kidneys, from the same cause, though hardly so promptly, or certainly, as these organs are in the course of the circulation farther away from the stomach where the alcohol is received into the blood. Now what is true of these stimulants, as to these larger glands, is true of all the other glands of the body whose office, like those already named, is either to supply some secretions useful in nutrition, or to eliminate waste and poisonous elements from the blood. But where falls the stress of a fever? It is upon the glandular system. What does a physician most of all want to do to abate and shorten a fever?—Get the glands into action. What organs fail first of all in all fevers, and cause that self-poisoning which is the basis of all fevers?—The glands, including, of course, the skin, which contains in its substance a vast network of minute glands, which, taken together, eliminate from the blood at least one-fourth of all the effete and worn-out elements of the continued waste of the body.

What then? Shall we use an article to cure fevers whose primary, heating, and irritant action impairs secretion, and whose after effects are to cause a slow consumption of the substance of the glands themselves?

Have not physicians while depending upon the delusive support of alcoholic stimulants in low fevers forgotten the power of truly helpful agents, *fresh air*, which is the great antidote for

the poisoned blood of fevers; free water-drinking, the only perfect mode of dissolving and blunting fever poisons; tepid sponging, and friction of the skin with cool hands, which abate fever, excite the skin to action, and tone and soothe the nervous system?

Alcoholic stimulants retard the breathing; this they do by a partial paralysis of that part of the brain which sends its nerves to the lungs, but the breathing retarded, carbonic acid gas— itself a narcotic poison—is retained in the blood, a most dangerous element in fevers, and the cause of a dusky or livid paleness, often seen here, and also in the face of chronic spirit-drinkers. In this manner the blood becomes impure, and not only in this way, but by the presence of alcohol itself, and by its checking the action of the glands. But it is only pure blood that flows quickly and freely through all the invisibly minute hair-like blood-vessels, where all the acts of nutrition takes place; and by so much as the blood becomes impure, by so much does there come a greater stress upon the heart to circulate this impure blood, and by reason of this stress it is often found dilated and hypertrophied. These facts, taken together, explain the narcotism of alcohol; they explain the blunting of all the bodily sensations, and they account for the loss of animal heat, or the failure of the body in keeping itself warm by its own organic processes.

Finally, what physician does not know how quickly alcoholic stimulants create a new and deceptive *want* in the nervous system—a *want* unknown to normal human nature, a want which cries “give! give!” with an importunity irresistible in proportion to the duration of the habit which caused it, and to the wreck of mind and body which follows it. What physician, who keeps love or faith with human nature, will not take care how he creates this fraudulent *want*, which, before himself or his patient knows it, may become a passion which blinds the reason and paralyzes the will, the only recuperative power of the soul.

HYGIENE OF BOOTS.—Breaking in a young span of boots is ecstasy, or would be if fitting boot-makers could be found; but there's the pinch, though they do give you fits sometimes.

Getting tailored to suit me, the next thing was to get booted. I succeeded. It cost me nineteen dollars.

I'd willingly return the compliment for nothing.

At last my boots were finished, and I went into them right and left; at least, I tried so to do.

With every nerve flashing lightning, I pulled and tugged most thrillingly, but in vain.

“There's no putting my foot in it,” says I.

“Give one more try,” says he.

Although almost tried out, I generously gave one more. I placed the boot-maker's awl in one strap, and his last-hook in the other, and with “two roses” mantling my cheeks, postured for the contest.

I tried the heeling process, and earnestly endeavored to toe the mark; but to successfully start the thing on foot was a bootless effort.

Then I slumberously gravitated, and dreamed thus:

Old “Leather-brains” in Satan's livery, producing a hammer from a carpet-bag proceeded to shape my feet, and fill them with shoe-pegs.

My nap was ruffled, and not to be continued under those circumstances, so I wisely concluded it.

“They're on!” says the boot-maker.

And a tight on it was, excruciatingly so.

My feelings centered in those boots, tears filled my eyes, and I was dumb with emotion; but quickly reviving, I slaked the cordwainer with a flood of rabid eloquence.

The cowering wretch suggested they would stretch.

But they shrank.

However, “in verdure clad,” I was persuaded into wearing them, and stiffly sidled off, a badgered biped, my head swinging round the circle, and my voice hanging on the verge of profanity all the way.

As fit boots they were a most successful failure. I gave them to the office-boy; but the crutches I afterward bought him cost me twenty-seven dollars. Yours calmly.—*Victor King, in Punchinello.*

FORCE IN POWDER.—Forty-three pounds of gunpowder exploded behind a three hundred-pound shot sends it thirteen hundred feet in one second. This force is exerted in the short space of the two-hundredth part of one second. It would take a steam-engine with the power of 880,681 horses to do the same work in the same time. One horse-power lifts thirty-three thousand pounds one foot in one minute.

WHY is a blind man like a water-pipe? He is generally *led* (lead).

Lord Bacon's Statements on Longevity.

BY H. RAY LANKESTER, B. A., OXFORD.

WE now present Lord Bacon's statements on the subject, which we have transcribed from a well-known translation of his works. Truth and error are strangely mixed in this interesting summary.

"Touching the length and shortness of life in living creatures, the information which may be had is but slender, observation is negligent, and tradition fabulous. In tame creatures their degenerate life corrupteth them, in wild creatures their exposing to all weathers often intercepteth them; neither do those things which may seem concomitants give any furtherance to this information (the greatness of their bodies, their time of bearing in the womb, the number of their young ones, the time of their growth, and the rest), in regard that these things are intermixed, and sometimes they concur, sometimes they sever.

1. Man's age (as far as can be gathered by any certain narration) doth exceed the age of all other living creatures, except it be of a few only, and the concomitants in him are very equally disposed, his stature and proportion large, his bearing in the womb nine months, his fruit commonly one at a birth, his puberty at the age of fourteen years, his time of growing till twenty.

2. The elephant, by undoubted relation, exceeds the ordinary race of man's life, but his bearing in the womb the space of ten years is fabulous; of two years, or at least above one, is certain. Now his bulk is great, his time of growing until the thirtieth year, his teeth exceeding hard, neither hath it been observed that his blood is the coldest of all creatures; his age hath sometimes reached to two hundred years.

3. Lions are accounted long livers, because many of them have been found toothless, a sign not so certain, for that may be caused by their strong breath.

4. The bear is a great sleeper, a dull beast, and given to ease, and yet not noted for long life; nay, he hath this sign of short life, that his bearing in the womb is but short, scarce full forty days.

5. The fox seems to be well disposed in many things for long life; he is well skinned, feeds on flesh, lives in dens, and yet he is noted not to

have that property. Certainly he is a kind of dog, and that kind is but short lived.

6. The camel is a long liver, a lean creature and sinewy; so that he doth ordinarily attain to fifty, and sometimes to a hundred years.

7. The horse lives but to a moderate age, scarce to forty years, his ordinary period is twenty years, but perhaps he is beholden for this shortness of life to man; for we have now no horses of the sun that live freely, and a pleasure, in good pastures; notwithstanding the horse grows till he be six years old, and is able for generation in his old age. The ass lives commonly to the horse's age, but the mule outlives them both.

8. The hart is famous amongst men for long life, yet not upon any relation that is undoubted. They tell of a certain hart that was found with a collar about its neck, and that collar hidden with fat. The long life of the hart is the less credible, because he comes to his perfection at the fifth year, and not long after his horns (which he sheds and renews yearly) grow more narrow at the root, and less branched.

9. The dog is but a short liver, he exceeds not the age of twenty years, and, for the most part, lives not to fourteen years; a creature of the hottest temper, and living in extremes, for he is commonly either in vehement motion, or sleeping; besides, the bitch bringeth forth many at a burden.

10. The ox likewise, for the greatness of his body and strength, is but a short liver, about some sixteen years, and the males live longer than the females; notwithstanding they bear usually but one at a burden; a creature dull, fleshy, and soon fatted, and living only upon herby substances, without grain.

11. The sheep seldom lives to ten years, though he be a creature of moderate size, and excellently clad; and, that which may seem a wonder, being a creature with so little a gall, yet he hath the most curled coat of any other, for the hair of no creature is so much curled as wool is. The ewes bear young as long as they live. The sheep is a diseased creature, and rarely lives to his full age.

12. The goat lives to the same age with the sheep, and is not much unlike in other things, though he be a creature more nimble, and a

somewhat a firmer flesh, and so should be longer lived.

13. The sow lives to fifteen years, sometimes to twenty; and though it be a creature of the moistest flesh, yet that seems to make nothing to length of life. Of the wild boar or sow, we have nothing certain.

14. The cat's age is betwixt six and ten years; a creature nimble and full of spirit. A creature ravenous in eating, rather swallowing down his meat whole than feeding.

15. Hares and coney attain scarce to seven years, being both creatures generative, and with young ones of several conceptions in their bellies. In this they are unlike, that the coney lives under ground, and the hare above ground. And, again, that the hare is of a more duskyish flesh.

16. Birds, for the size of their bodies, are much lesser than beasts; for an eagle or swan is but a small thing in comparison of an ox or horse, and so is an ostrich to an elephant.

17. Birds are excellently well clad, for feathers, for warmth and close sitting to the body, excepted wool and hairs.

18. Birds, though they hatch many young ones together, yet they bear them not all in their bodies at once, but lay their eggs by turns, whereby their fruit hath the more plentiful nourishment whilst it is in their bodies.

19. Birds chew little or nothing, but their meat is found whole in their crops, notwithstanding they will break the shells of fruit and pick out the kernels; they are thought to be of a very hot and strong construction.

20. The motion of birds in their flying is a mixed motion, consisting of a moving of the limbs, and of a kind of carriage, which is the most wholesome kind of exercise.

21. Aristotle noted well touching the generation of birds (but he transferred it ill to other living creatures), that the seed of the male confers less to generation than the female, but that it rather affords activity than matter; so that fruitful eggs and unfruitful eggs are hardly distinguished.

22. Birds (almost all of them) come to their full growth the first year, or a little after. It is true, that their feathers in some kinds, and their bills in others, show their years; but for the growth of their bodies it is not so.

23. The eagle is accounted a long liver, yet his years are not set down; and it is alleged, as a sign of his long life, that he casts his bill whereby he grows young again; from whence comes that old proverb, the old age of an eagle. Notwithstanding perchance the matter may be,

thus, that the renewing of the eagle doth not cast his bill, but the casting of his bill is the renewing of the eagle; for, after that his bill is grown to a great crookedness, the eagle feeds with much difficulty.

24. Vultures are also affirmed to be long livers, insomuch that they extend their life well near to a hundred years. Kites likewise, and so all birds that feed upon flesh, and birds of prey, live long. As for hawks, because they lead a degenerate and servile life for the delight of men, the term of their natural life is not certainly known; notwithstanding amongst mewed hawks some have been found to have lived thirty years, and amongst wild hawks forty years.

25. The raven likewise, is reported to live long, sometimes to a hundred years. He feeds on carrion, and flies not often, but rather is a sedentary and melancholic bird, and hath very black flesh. But the crow, like unto him in most things (except in greatness and voice), lives not altogether so long, and yet is reckoned amongst the long livers.

26. The swan is certainly found to be a long liver, and exceeds not unfrequently a hundred years. He is a bird excellently plumed, a feeder upon fish, and is always carried, and that in running waters.

27. The goose also may pass amongst the long livers, though his food be commonly grass, and such kind of nourishment, especially the wild goose; whereupon this proverb grew amongst the Germans, *Magis senex quam anserinvalis*—older than a wild goose.

28. Storke must needs be long livers, if that be true which was anciently observed of them, that they never came to Thebes, because that city was often sacked. This, if it were so, then either they must have the knowledge of more ages than one, or else the old ones must tell their young the history. But there is nothing more frequent than fables.

29. For fables do so abound touching the phoenix, that the truth is utterly lost, if any such bird there be. As for that which was so much admired, that she was ever seen abroad with a great troop of birds about her, it is not such wonder; for the same is usually seen about an owl flying in the day-time, or a parrot let out of a cage.

30. The parrot hath been certainly known to have lived three-score years in England, how old soever he was before he was brought over; a bird eating almost all kind of meats, chewing his meat, and renewing his bill; likewise curat and mischievous, and of a black flesh.

31. The peacock lives twenty years, but he comes not forth with his argus eyes before he be three years old; a bird slow of pace, having whitish flesh.

32. The dung-hill cock is venereous, martial, and but of a short life; a crank bird, having also white flesh.

33. The Indian cock, commonly called the turkey cock, lives not much longer than the dung-hill cock; an angry bird, and hath exceeding white flesh.

34. The ringdoves are of the longest sort of livers, insomuch that they attain sometimes to fifty years of age; an airy bird, and both builds and sits on high. But doves and turtles are but short lived, not exceeding eight years.

35. But pheasants and partridges may live to sixteen years. They are great breeders, but not so white of flesh as the ordinary pullen.

36. The blackbird is reported to be, amongst the lesser birds, one of the longest livers; an unhappy bird, and a good singer.

37. The sparrow is noted to be of a very short life. But the linnet, no bigger in body than the sparrow, hath been observed to have lived twenty years.

38. Of the ostrich we have nothing certain; those that were kept here have been so unfortunate, that no long life appeared by them. Of the bird ibis we find only that he liveth long, but his years are not recorded.

39. The age of fishes is more uncertain than that of terrestrial creatures, because living under the water they are the less observed; many of them breathe not, by which means their vital spirit is more closed in; and, therefore, though they receive some refrigeration by their gills, yet that refrigeration is not so continual as when it is by breathing.

40. They are free from the desiccation and depredation of the air ambient, because they live in the water, yet there is no doubt but the water, ambient, and piercing, and received into the pores of the body, doth more hurt to long life than the air doth.

41. It is affirmed, too, that their blood is not warm. Some of them are great devourers, even of their own kind. Their flesh is softer and more tender than that of terrestrial creatures; they grow exceedingly fat, insomuch that an incredible quantity of oil will be extracted out of one whale.

42. Dolphins are reported to live about thirty years; of which thing a trial was taken in some of them by cutting off their tails, they grow until ten years of age.

43. That which they report of some fishes is

strange, that after a certain age their bodies will waste and grow very slender, only their head and tail retaining their former greatness.

44. There were found in Cæsar's fish-ponds lampreys to have lived three-score years; they were grown so familiar with long use, that Crassus, the orator, solemnly lamented one of them.

45. The pike, amongst fishes, living in fresh water, is found to last longest, sometimes to forty years; he is a ravener, of a flesh somewhat dry and firm.

46. But the carp, bream, tench, eel, and the like, are not held to live above ten years.

47. Salmon are quick of growth, short of life; so are trouts; but the perch is slow of growth, long of life.

48. Touching that monstrous bulk of the whale or ork, how long it is weilded by vital spirit, we have received nothing certain; neither touching the sea-calf, and sea-hog, and other innumerable fishes.

49. Crocodiles are reported to be exceedingly long lived, and are famous for the times of their growth, for that they, amongst all other creatures, are thought to grow during their whole life. They are of those creatures that lay eggs ravenous, cruel, and well fenced against the waters. Touching the other kinds of shell fish we find nothing certain how long they live."

I SHOULD say that Dryden is more apt to dilate our fancy than thought, as great poets have the gift of doing. But if he have not the potent alchemy that transmutes the lead of our commonplace associations into gold, as Shakespeare knows how to do so easily, yet his sense is always up to the sterling standard; and though he has not added so much as some have done to the stock of bullion which others afterwards coin and put in circulation, there are few who have minted so many phrases that are still a part of our daily currency.—*Lowell*.

LITTLE THINGS.—Dr. Franklin tells us that in his youth a little book fell into his hands entitled "Essays to Do Good," by Cotton Mather. "It was tattered and torn, and several leaves were missing, but the remainder gave me such a turn of thinking as to have an influence on my conduct through life; for I have always set a higher value on the character of the doer of good than on any other kind of reputation, and if I have been a useful citizen, the public owe all the advantages of it to that little book."

Boys, and What to Do with Them.

BY MRS. E. V. DARWIN.

OLIVE LOGAN has written of girls. I, too, love them. The wings of two angel ones hover over me as I write. God be praised that the only one who now lights my home is growing into an age of better development for woman! But let us not, in the growing thought for the girls, overlook the boys. He—your boy—may be a rosy baby now in your arms, and as you poise his little feet in your hand, you can not but think of the time when his plump limbs will have grown to athletic beauty and strength, and the sweet lips give forth utterances for the good of his fellows. How is this best to be accomplished? How is the friction of circumstance and influence to be so guaged as to form a noble character? It is worth a life-time of thought and research to have reared one noble man; to have him developed morally, mentally, socially, and physically, as God designed he should be when he gave him to you. You want to give your child a healthy body, that it may be a fit temple for the indwelling of a healthy soul. Then give him your first care, instead of yielding up those first precious years to hirelings, who, by ignorance, want of judgment, or worse, may plant the seeds of disease that life may not overcome. You may have been taught that fashion, friends, and society had many claims upon you, and that you must yield to them instead of the demands of your child. Make *them* subservient, and then both may be justly dealt by. In food and dress use nature and common sense as a guide. Use soft, light material, covering the body so that warmth and freedom may be secured. In food, learn what makes bone, muscle, and blood, and out of the abundance which God has given us, feed as nearly in its native simplicity as possible, and not so prepared as to be stimulants, which are irritants. Then with the proper use of pure air and water, the physical conditions are fulfilled. Now, the smile and look of love from your eye satisfy his social wants. Ere long his little playmates, with rattle and toy, are acceptable; and not far distant, the game and romp, when he is one among many. There he will learn self-reliance, with the opportunity of exercising benevolence or the reverse. Teach him *early* to yield his wishes to others, to think of others' pleasure and happiness before his own. Then comes the great question, the great study

even, how to employ the time in which he is under your control, so that he may not only be happy in such employment, but that it may in the best manner conduce to his full growth and well-being. And for all this, let me throw in a plea for child-life, boy-life, with its exuberance, in the country; that he may grow in a garden of God's own planting, not in a hot-house, the city; where he may have no unnatural stimulants and excitements, no artificial props nor repressions. Curiosity is one of the strongest faculties of childhood. Mother Earth woos him with so many voices to gratify that faculty, giving the best amusement, and yielding instruction at the same time. Let utility and beauty grow side by side in his soul. No matter how young, let each attainment be made to subserve a useful end, giving him a double relish and incentive. The spiritual portion of his nature is not left unsupplied by the recognition of the subtle elements that work through all, as guided by an all-wise and loving Hand. On such a foundation, science, the arts, and poetry may build. When you have formed, not only a love for but *use* for these, you have built a bulwark against the temptations of the world.

What is it to be a man? The noblest work of God. Then how fearful to pervert that work, and make it evil. Mothers, when you have fulfilled the physical conditions of your child, and have made for him a home, in the best acceptance of that word, you have done much, and that which only a mother can do, but you can do more. As his physical, moral, and spiritual development goes on, keep very near to him, in each department of his nature; follow the various windings of the new seething life with judicious sympathy and care. Let him feel that to you, of all the world, his soul may be open, and you may then stand a guide to the bark freighted with so much treasure. It is said that every child is a child of sin. Surely each one is born with tendencies to evil, but may it not be also true, that if those tendencies are overgrown with influences for good they may die out for want of nourishment, and the roots being planted in the good soil of a loving home, surrounded by the sweet influences of nature, he may mature and bloom into a strong, vigorous, and noble life?

FIFTH AVENUE, New York.

To Any Desponding Genius.

BY ALICE GARY.

TAKE this for granted, once for all :

There is neither *chance* nor *fate*,
And to sit and wait for the sky to fall,
Is to wait as the foolish wait.

The laurel, longed for, you must earn—
It is not of the things men lend,
And though the lesson be hard to learn,
The sooner the better, my friend.

That another's head can have your crown
Is a judgment all untrue,
And to drag this man, or the other down,
Will not in the least raise you !

For, in spite of your demur, or mine,
The gods will still be the gods,
And the spark of genius will outshine
The touchwood, by all odds !

Be careful, careful work to do,
Though at cost of heart, or head—
The praises, even of the Review.
Will hardly stand in stead.

No light that through the ages shines
To worthless work belongs—
Men dig in thoughts as they dig in mines,
For the jewels of their songs.

A fresco painter in ceiling wrought,
With eyelids strained, 't is said,
Till he could but read of the fame so bought,
With the page above his head.

Hold not the world as in debt to you
When it credits you day by day,
For the light and air, for the rose and dew,
And for all that cheers your way.

And you, in turn, as an honest man,
Are bound, you will understand,
To give back either the best you can,
Or to die, and be out of hand.

Country and City Life.

BY REV. CHARLES M. BRIGHAM.

"GOD made the country and man made the town." The songs of poets, the homilies of preachers, the theories of economists, only amplify this ancient proverb. The praise of rural life is still earnest and ardent. From Hesiod to Wordsworth, from Virgil to Tennyson, from Horace Flaccus to Horace Greeley, the men who have written for drawing-rooms and palaces have insisted upon the superior charm of the fields and the woods, and a home apart from the haunts of men. "*Fortunatus est ille deus qui novit agrestes*"—"Happy indeed is he who knows the rustic gods"—this is the refrain of fashionable not less than of romantic sentiment. What gushing school-girl has not poured out her raptures upon the pleasures of the farm and the pasture, all the more perhaps that she has had no experience of them? Is not love's young dream oftener of "love in a cottage" than of love in a four-story brownstone front in the middle of a block in "Fortieth" or "Fiftieth" Street? Sentimental youths and maidens do not now sing that silly duet, "when a little farm we keep," which delighted the souls of the last generation in Boston drawing-rooms, but they cherish withal a hope that they may sometime "retire on their estate," own land, and become lords of the soil. Not the plaudits of the crowd, but the rippling streams shall satisfy the statesman, when his work is done. "Inglorious, he will love the rivers and the woods," as the bucolic bard has so sweetly suggested. In spite of depreciating epithets, of satirical comment upon the boorish manners, the awkwardness, the bashfulness, the greenness, the ungraceful raiment, expressed so concisely in that one word, "countrified," rural life keeps its dignity as the most ancient, the most natural, the most dignified, and the purest of all conditions in human existence; better than life in the city or life on the sea, or life in the mine, or life in the army, or life of the nomad, or life of the vagabond.

Along with this praise of the purity, the simplicity, the peace, the joy of country life go oburgations upon life in the cities, those centres of profligacy, corruption, vanity, and crime, those "sores on the body politic." "Ah, wicked Paris," says one pious New York editor, in his book of travel, "I fear that you will laugh and be damned." "Don't come to the cities," is the

advice that prudence and piety concur in urging upon the youth of the land. The moral dangers of cities are a steady theme for the country pulpit, and the physical dangers of cities are illustrated in the medical lecture-room by those who have ample knowledge of their theme. The competitions, the temptations, the syren deceits of the city are set in contrast with the tranquil ways of rural life. Young men are warned by sarcasm, by rhetoric, and by arithmetic, of the risk they are running in venturing in the lottery of city life, where the blanks are so many and the prizes are so few. Do not statistics prove that ninety-five merchants out of a hundred fail in business? Are not the salaries of clerks inadequate to meet their board bills? What virtue shall be secure in these multiplied fascinations, of the theatre, the saloon, the billiard-room, the club, the stock exchange, and the house of the harlot? The city is a dreadful place, even when it is grand and bewildering. How much wiser to stay in the village or on the farm, to keep away from the strife and the peril of these hateful crowds, and to earn a living by honest labor! Who would wish a nobler life or a sweeter epitaph than the elegy in the country church-yard, which tells the virtue and the honor of those who shunned the maddening crowd of the great marts, and kept in the cool sequestered vales the noiseless tenor of their way? The Hebrew prophets were not more fervent in their rebuke, and lament, and warning of the wickedness of Tyre and Babylon, of Jerusalem and the cities of Egypt, than the American prophets of to-day about the wickedness of New York, and Chicago, and Washington, and even of Boston—the Athens of America, and the Jerusalem of the Puritan faith.

These contrasted pictures of the purity of rural life, and the danger of city life, seem to have small influence in hindering the constant movement from the country to the city. Cassandra could not prophesy more vainly than the preachers. The passion for city life is all the time gaining force, and the more its perils are demonstrated the more there are to tempt them. Not only do the sons of farmers forsake the farm and go to seek their fortune in the crowded streets, but the farmers themselves sell their farms, and go to the city to enjoy in the last years of life the hard gains of their long toil.

It is the dream of country girls that they shall live in the city when they are married; if they can not have the fortune of Cinderella, and a house on the avenue, they shall at least have a house in the suburb, where they can see the glory of the city, and feel that it belongs to them. Very few there are who go back to the farm, even after the experiment of urban life has failed; they will try this experiment again and again, before they will become slaves of the soil. We accept the poetry of pastoral life, the eclogues and the georgics, but the prose of city life wins in the contest. The real pride of the nation is not in its wheat-fields and its potato-fields, not in its barns and pastures, but in the marvellous growth of its great cities. "Come and see Chicago, the eighth wonder of the world," is the invitation which the West holds up to the wondering foreigner. Every year that sentiment which has ruined France, centering every thing in Paris, is gaining ground in this republican land; and we mark our prosperity more and more by the growth of our cities. The consolation for neglected fields in Vermont and New Hampshire is that more streets are opened on Manhattan Island, and that more blocks of brick and iron are built on these streets. Even the emigrants who come from the bogs of Ireland find the cities more convenient than the rich pastures, which wait for their spades. They stay in filthy tenement houses rather than go apart upon the fertile, but lonely prairie.

This lamentable tendency, nevertheless, has its excuse and its reason, like all tendencies. City life has advantages which can not be disputed, and which plead powerfully with a practical people. Gas for light, and water on all the floors of the house, are real conveniences. Shops close at hand, the butcher, the baker, the carpenter, the grocer, the tailor, and the haberdasher within easy call, add a great deal to the comfort of life. In a city, one can buy every thing on any day, and can gratify any wish. There is variety of choice; the newest things are there, the latest fashions. One has not to wait until the fashion has changed to learn what it really is. In the city you can get every thing that you want, and when you want it. And you can ride so cheaply—five miles for five cents, and in a good, roomy, comfortable horse-car, so safe, so easy to get into and out of, and with no trouble or responsibility of horse or carriage! In a city, too, you have so many neighbors, a dozen families within call from your window; no need to be lonesome there. You can even take your choice of

churches, for the chances are that within comfortable walking distance, half a dozen sects and as many schools within the sects, will have each one or more tabernacles of their faith; you can hear High Church or Low Church, Orthodox or Liberal, Catholic or Infidel, just as you may prefer, from the mouths of their oracles. And then, too, how many spectacles there are in the city that the country never can show, spectacles in the streets, spectacles in halls, spectacles in the theatres, military processions, with long ranks of valiant warriors, Masonic processions, with their white aprons so clean, and their mystic emblems; Fenians and Trades Unions, and gorgeous funerals, so delightful in that long string of black coaches, and in the great nodding plumes of the hearse; and Booth and Wallack, and the Black Crook, and Admiral James Fisk, Jr., with his bevy of beauties, and his "Twelve Temptations!" Think of these delights, with all the other luxuries and amusements, the hand-organs, and the brass bands, and the philharmonic orchestra, and the picture stores, and the jewelry stores, and the fairy dry good stores, and the galleries, and the public libraries, and the grand celebrations! How shall the country ever offset by its attractions these luxuries and comforts, which are perennial, and real all the year round? Of what use to deny the superior convenience of a life in the city, where every want is so readily met, and even a surly rector may not hinder the burial of a sinner, while there is "a little church round the corner?" If you wish excitement, you can have it at any time by walking a square or two, and if you wish privacy, you can keep it by shutting your door. How pleasant, too, to know that there is always a policeman within call, that the schoolhouse is not far off, and that you have part in something that is really great, where things are done on a large scale! These advantages of city life are very palpable, and make their inevitable appeal. It is difficult for one who has enjoyed them for years to understand how others can live without them, or how they can be dispensed with. When we go into the country, to live on our estate, we must take a considerable part of these luxuries with us, else our dream of happiness will be rudely falsified.

Yet against this array of conveniences in city life, it is quite possible to bring an array of annoyances and dangers equally positive and unquestionable. Noise, noise, from morning till night, and in the night, too, is the inevitable plague of city life. The wheels will rattle upon the pavements, the trampers, and news-

boys, and milkmen will scream in the streets, there will be ringing of bells, and firing of guns, and the constant mingling of innumerable discords. The music of hand-organs will cease to be luxury, and become exasperation in its endless grindings. Dirt, in the form of mud or the form of dust, is another fatal contingent of city life, which all the skill of the sweepers can not remove. In half the cities of the land, where there are steamboats at the piers, or factories in the streets, smoke will load the air, and leave its grime on the staircase and the table. The narrow streets hinder light, and not a few will be compelled to sit in darkness even in the luxurious "surrounding." The convenient horse-cars, in which riding is so cheap, may be crowded, and become a snare in the help they give to pickpockets; and alas for him who trusts them when the snow has fallen heavily! The water-pipes, so "handy," may freeze, and leave the house forlorn, when their service is most important. That other houses are so near makes fire all the more dangerous; and who can tell what pestilence is in the chambers across the way, and what contagion may come in this close neighborhood? Have not the streets their dangers, in the tangle of carts, and carriages, and omnibuses, or the rush and fury of crowds and mobs? Who shall feel safe in the city when burglars are breaking locks, and trying windows, and hiding in closets? If the spectacles are abundant, are not the saloons more so, saloons for gambling, and drinking, and other iniquities? Are not the city doors besieged by beggars, and trampers, with their lying stories, and their ready fingers so quick to pilfer? Think of the artificial wants which this rivalry of city life creates, and the fearful expense which it requires. Think of the taxes, an ever-increasing burden! If there are such numerous churches within convenient distance, and such fine liberty of choice, consider the cost of any one of these, and what contributions they call for. Salvation in the cities in any form is an expensive luxury. Surely, with all these drawbacks, and how many more that might be mentioned, the conveniences of city life are fairly balanced, and it ought not to seem so attractive. The heartlessness, the frivolity, the dissipation, the risks, and the plagues of city life must be taken into the account, when we magnify its comforts, and think of its dignity. If the aggregate is so grand, the units are the more insignificant, and the details are repulsive.

But country life has also its tale of miseries, which match, as the practical men will say, the

miseries of city life. It has the fatal ban of *dullness* to condemn it. The epithet "stupid" seems to describe it concisely and exactly. It is monotonous, has no variety, no excitement, no freshness. The scenes are the same all the time, and the days are all alike. One is likely to "rust out," who lives in the country, and "rust" and "rust" go together, by more than euphony. The city may be a "sink of iniquity," but then it is lively; and is not a lively hell better than a stupid heaven? So at least the young will reason, and not a few who are demure and pious, too. Country life, too, is lonely, and the penalty which is paid for broad landscape is the loss of human society. Trees, and cows, and sheep, excellent as they are, are not full substitutes for friendly men and women. Many of those who are condemned to the solitude of the farm-house, while husbands and sons are off at labor, envy the delight of those city dames whose friends can "run in at any moment." The cares of country life, too, seem petty, and there is no motive to exertion. What use in wearing handsome dresses, if no one comes to see and admire them? Then, too, the storms in the country, wind howling around the house, snow-drifts piled in the roads, the generous mud, the choking dust of dry weather, the insects, flies, beetles, and singing mosquitoes, which swarm in their season; let one who fancies country life try it in fly-time, or when the mercury is below zero, and the well and wood-pile are outside of the house. And what hard work to keep any thing in order; servants unwilling to stay, because there is no Catholic church within three miles, and they can not see company; farm hands with sharp appetites and cow-hide boots, bringing into the house an aroma that is not of Araby the blest! No schools, too, within walking distance, and those that there are, small, inferior, and poorly provided! Are not these trials of country life very real and vexatious? Is not the enthusiasm for this life only irony, when it is analyzed and tested?

And yet the lovers of rural life are not going to give up their cause to these grumblers, or allow that the man who goes back to the meadows of his childish sport, and on that spot so dear to memory, "slaps a mosquito and brushes a tear," is wrong in his tearful regret. The poets have reason when they sing of the joys of Arcadia in the songs of birds, and the music of brooks and winds. It is an unspeakable privilege which the country residents enjoy, to have plenty of light all day, and plenty of fresh air, to see the sun from his rising to the setting,

and to breathe inspirations of oxygen not adulterated with feculent gases and poisons; to smell the new-mown hay in summer, and the resinous pine in winter, as it softens the blast. Green lawns, and fields white to the harvest are more beautiful to the eye than the best pictures of landscape in the galleries of Schaus and Goupil. And fresh vegetables are good, too; and milk that is a pure secretion, and not mixed with chalk, or the juice of the hydrants. The singing of birds, which we can have in gratuitous concert on every morning for half the year, is worth more, on the whole, than the best performance of Beethoven or Rossini, which must be listened to at a dollar a ticket; and if we can hear the real nightingale we may not feel the loss so much if we fail to hear the "Swedish Nightingale." The quiet of the country may become oppressive, but after all, that quiet is better for the nerves, and the soul, than the perpetual rattling of wheels on the pavement. The blessings of country life are real, and we may accept the verdict of that shrewd Roman epicure, who was not at all flighty in his fancies, of the happy man who gets away from the exchange, to look out for his oxen on his land, like the earliest race of men: "*Beatus illa qui procul negotiis, ut prisca gens mortalium, Paterna rura bobus exerceat eis, Solutus omni fœnore.*" Health comes in the country, if wealth is more slowly gained there; and the freedom of "walking large" away from the limits of streets and walls and the eyes of policemen is very inspiring.

It is hard to decide, in this conflict of pleading, which condition of life is to be preferred. And it is more philosophical to accept the fact that both conditions are necessary, and that both belong to high civilization. There can be no civilization without cities, no high civilization without large cities. The Jerusalem of Solomon, and not the Salem of Melchisedek, marks the golden time of civilized Canaan; and Paris, with its *enceinte* of twenty miles, not Lutetia on an island in the Seine, symbolizes the wealth and culture of the nineteenth century. We must have both country and city life; and it would be well if every man and woman could have them both, if every family could have its city house and its country house, and divide the time between the work of man and the work of God. Only the fewest are blessed with such a double possession. Only the fewest can settle the dispute by choosing both kinds of life. And some who really seem to have the fortune of owning estates both in town and country destroy this by identifying the country house too much with

the city house. What are called "cottages," sometimes are only palaces under a false name, city houses with rural surroundings, vain efforts to nullify the sentiment of the place. Sometimes, too, we have the grotesque specimen of a cottage on a city avenue, of gables and flagstone crowning a one story tenement, and in front a shaven lawn of thirty feet square, with sculptured dogs and sheep to keep up the illusion. All such fantastic efforts to transmute the condition of city and country life are sure to fail, and mark only the "shoddy" taste of men who are anxious chiefly to be in the fashion. If men live in the country, let them live honestly in the country, and have their house and grounds in harmony with nature, no matter how much money they may have to spend. And if men live in the city, let them be just as honest there, and not try to make number four of a brick or freestone block look like a villa, to give the idea that the fortunate denizen of the thirty-foot lot has found his *rus in urbe*.

City life and country life ought not to be confounded, but they may be reconciled, and it is possible that those who live in the city may have something of the privilege of the country, and that those who live in the country may have something of the privilege of the city. The two ought to be made friendly, and to supplement each other. There is no real need that every man who lives in the country should be a "rustic," or as the old pun had it, a "rusticus," or that every man who lives in the city should be a "cockney." Refinement, grace, courtesy, respectability belong to life in one kind of life as much as in the other, though the fashion of garments may be different, and the work may be varied. A retired Congressman may keep his *otium cum dignitate* in mild labour in his potato-patch as much as in the slumber of an arm-chair in the Fifth Avenue. Both kinds of life allow the highest culture. Indeed, it is not easy to say whether more of the great scholars and writers have done their work in the city or in the country. Some of the finest descriptions of natural scenery have been written in the narrow lanes of London and Paris, while the most stirring riots of the mob have been told from the quiet of rural haunts, where the only murmur was of streams and breezes. The human brain can adapt itself to the most various conditions, and there are even those, like the villain Ruloff, who can work out the problems of science, in the darkness and bondage of the criminal's cell. There are saints alike in country and in city, and prophets, too. It is said sometimes, that the city pulpits have

to be supplied from the fresh life of the country, and that the preachers of righteousness to the wicked of the great social centres must be those who have been born amid purer influences. And yet it is a fact that many of the most noted preachers have been born and brought up in the city, and in speaking of its vices speak of what they have known and seen from the beginning of their days. That is true of half-a-dozen of the most eminent ministers of Boston.

To bring this essay to a practical conclusion, let us answer, if we can, the two questions: "How may the Country come to the City?" and "How may the City go to the Country?" First, How may the Country come to the City? In the first place, by getting *all the sunlight* that you can get into the house, by allowing the windows to transmit their light without heavy draperies to absorb and dull it. If you can not have the landscape, at any rate have the light. Then, in the next place, by flowers around the house, and by plants and birds in the house, you can have something that suggests the country. A wretched little lawn is not worth much, but a climbing wisteria with its blue clusters, a bed of fragrant mignonette, the hues of verbenas and balsams, the delicate vine of the "morning-glory"—flowers that may be trained in the smallest door-yard or back yard, or on the window-sill, give something of the sentiment of the country even in the narrow city street. Caged birds, too, if they will sing, may remind one of the "feathered songsters of the grove." The cock's shrill clarion, indeed, is a nuisance which city proprieties can with difficulty bear, but no one will object to a linnet or a canary. The work of feeding these birds, and of caring for this little garden, is country work, as far as it goes.

In the third place, by frequent excursions outside the limits of brick and mortar, to the parks, if there are parks, such excursions as can be cheaply made, intercourse with nature can be kept up, and the city denizen can have the pleasure of country experiences without the pains. One day in a month spent in such excursions will give an idea of the country, at all seasons of the year. And the effect of these short excursions will be heightened by an annual summer journey, which every one who has means ought to take, and which is worth far more than the same cost expended on showy furniture, or even on real works of art. Of this, we shall have more to say in a future essay. And, in the fourth place, something of the quiet of the country may be realized by

choosing a city house on a court, or a side street, away from the thoroughfares of traffic, or a street where the pavement is of wood or gravel. There are, even in New York, streets in which it is possible to sit by an open window without risk of deafness. These are ways in which the life of the country may have some show in the life of the city.

2. How may the City go into the Country? In many ways. First, in the *structure of the house*, not by building it of brown stone, or five stories high, but by fitting it with conveniences. A country house can have a bath-room, and even have gas, as well as a city house, and can be as compactly built. Then, in the next place, books bought for the library will supply some of the want of a public library, and newspapers can bring the reading-room. A country house that has plenty of books and papers can never be quite lonely, though there is no village within a mile. And these are a very good substitute for the "lectures," on which villagers spend so much time and money. To these, as a third resource, may be added instruments of music, pictures, and engravings. Art, of all kinds, is just as fit and as possible in a country house as in a city house. What is saved in rent and fashionable upholstery may be spent well in providing for the aesthetic sense. There is nothing incongruous in the piano in a log-cabin. If the rustic can not haunt the concert-rooms, let him make music for himself, as well as he can. And one who travels in the West knows that the best music is not by any means in Chicago or St. Louis, but that it is quite as good in the farm-houses. A fourth method of bringing the city to the country is to "have company," to invite guests to the house, and not only neighbors of the region, but city guests, too. A city house may be left to its solitude and darkness, but a country house ought never to be. It must have its rooms occupied, and voices to ring in its hall. And, finally, the city is brought to the country by living in the neighborhood of some railway-station, which makes access to the city easy and tempting. We have no space to enlarge upon these answers.

WHAT A PIECE OF WORK IS MAN! how noble in reason! how infinite in faculties! in form and moving, how express and admirable! in action, how like an angel! in apprehension, how like a god! the beauty of the world! the paragon of animals!—*Hamlet*.

On Not Doing What You Like; or, An Honest Day's Work.

BY F. B. PERKINS.

IT is not effort that is the curse—it is Drudgery.

Activity is life. Labor is a blessing. Neither a healthy body nor a healthy mind, will or can be idle. Indeed, there is great reason in favor of the doctrine that the mind is active all the time, whether we know it or not; which ought to be a great consolation to the stupid, since it implies that they have all the thought there is, if they could only get it out.

Yet there is no denying that Drudgery is a curse. Mere mindless toil is hateful; a dead-lift of duty, to be done without complaint where necessary, but very rightly to be avoided the very instant it is possible.

No human trait is clearer than this feeling; no effort of human wit more vast or more wonderful, than that to escape from this load. Do you not remember at the moment what element of practical life it is that expresses this effort?

It is Mechanical Invention; Labor-saving Machinery and Processes.

The intense intellectual activity of the Americans makes them hate Drudgery more than other nations, and renders them less able to endure it. Accordingly, it is an American characteristic to invent, *i. e.*, to substitute thought for Drudgery.

This is the trait to which we owe the sewing-machine, the reaping-machine, the nail-machine—all the machines. And, it may be added, what on earth is the use of The New York Tribune flying in the face of the American man, by insisting that he should go out into the woods and live by his hands? America is a brain, not a fist. If any American lives by manual labor, he does so as the prisoner digs at his dungeon wall—to get out!

Whenever Invention shall have measurably filled its field, all that vast portion of human energy now yielded to Drudgery may be devoted to Intellect. Every new machine propels us toward a golden age. It requires no prophet to foresee that there is thus almost literally but a single step from mechanics to the millennium.

Yet at present, the world is filled full of drudgery. We can not fly; we must needs walk. We can not study and enjoy; we must be ready to pay our bills on the first. We can not follow the philosopher in his magnificent train of

thought; for those pigs are squealing like fury, and the cows are in the corn. We can not master the deep loveliness of Mendelssohn's "Songs without Words;" for there are two shirts to mend, six pair stockings to darn, and a new seat to be put into this old pair of pantaloons.

Horrid!

No doubt. But isn't it funny, too? And what is of a great deal more importance, *it must be done*. Really, it might almost seem as if the world was organized on a plan for disregarding the finer feelings, disappointing us on system of just what we want, and forcing us to spend our whole lives in exactly the way we wouldn't choose.

There are several considerations to suggest here.

For instance; unrest and dissatisfaction belong to the very structure of some ill-regulated minds.

Again: It has long ago been observed that many people who do very well in their way, are incessantly haunted with a notion that they would much more greatly adorn a different station, and that their not doing so is somehow or other an injury and injustice. Comedians, for instance, have often labored under an uneasy notion that their real greatness was in tragedy. This was the case, I believe, with the late William E. Burton.

So that dissatisfaction alone is not reason enough for change, or for unhappiness. Christopher North, in one of his breezy jocular moods, intimated that he could always compass his objects, and he embodied his recipe in a ridiculous paradox. He jeered at those dull souls who begin by saying "First catch your trout." Our plan, he proceeds, is greatly superior. "We eat our trout whenever we want them, and catch them when we can."

Without stopping to unravel the extravagance. I add a suggestion that will serve to lessen the disagreeableness of many a career of toil. Systematize your work. Lay its principles in a scientific order, and apply them by a corresponding frame of practical rules. In fact, this is very much like inventing a labor-saving machine; and at any rate, it is to a great extent true that a considerable degree of pleasure may be taken in doing any thing whatever that can be done on system.

There is a higher and deeper motive, to be unconditionally recommended to all those souls fine enough and strong enough to use it. Do your duty, because it is your duty. The old poet has said it in his quaintly-phrased and often-quoted stanza :

A servant with this clause

Makes drudgery divine.

Who sweeps a room as for thy laws,

Makes that, and the action, fine.

Enjoy if you can; be contented if you can't enjoy: and be resigned if you can't be contented. Or, in other words:

1. Do what you like.

2. If you can't do that, like what you do.

3. If you can't do that, make the best of it.

Last of all, I will add a rule that some can

practise if not all, and which will be useful in more ways than one to those who can apply it:

Do your day's work clean up, and then make it your duty to enjoy yourself until bed-time. Don't chew your business over again. Fling it away. Empty your mind of it. Rest yourself. It is one of the chief recommendations of the Christian Sabbath, that the duty of cleansing the mind of secular things on that day becomes a healthful rest. Also, the pious teachers say, the true Christian's days are all Sabbaths—or should be. This is my idea: Make a daily Sabbath—a rest and relief—out of what remains when work is over. Don't be too anxious about improving your mind, unless you enjoy it. Healthful enjoyment improves the soul; and the soul is perhaps as important as the mind.

Dust and Disease.

I.

○ F the wonderful things that lie round us concealed
How much have the true sons of science revealed?
Good Faraday long was the foremost of these,
And now Tyndall has told us of Dust and Disease.

II.

If a long beam of light crosses through a dark room,
It seems peopled with moats that shine bright in the gloom;
But the gay dancing things that the gazer thus sees
Are in fact nothing better than Dust and Disease.

III.

Around us, above us, on all sides they float;
They light on our skin, and they slide down our throat;
Though we don't feel or see them, yet go where we please,
The atmosphere 's laden with Dust and Disease.

IV.

All the varying ills to which flesh is an heir,
All the foes of both body and mind may be there,
Lusts and Fevers that burn, Fears and Agues that freeze,
May be mixed in these atoms of Dust and Disease.

V.

All places alike these intruders infest,
And 't is thought that St. Stephen's is none of the best;

Where Faction and Folly are busy as bees,
There will always be plenty of Dust and Disease.

VI.

In Westminster Hall, where the Lawyers converse,
These pestilent particles ever are seen;
Where wrangling and wrath can be hired with big fees,
You are sure of a market for Dust and Disease.

VII.

The Church should be free; but some heretics say
That the Vatican lately was in a bad way;
And some other Assemblies of learned D. D.'s
Are perhaps not exempted from Dust and Disease.

VIII.

The Dissenters are thought a peculiar people,
Much more pious than those that sit under a steeple;
But some one-sided views and intolerant pleas
Seem to savor a little of Dust and Disease.

IX.

But what of the Doctors? Are they without flaw?
Is Medicine more pure than Religion or Law?
I suspect that some, even with Doctor's degrees,
Love to kick up a Dust and shake hands with Disease.

X.

Diplomacy dresses her visage in smiles,
To conceal all the better her treacherous wiles;
But behind her false front a keen critic may seize
On strong proofs of her traffic with Dust and Disease.

XI.

Where Fashion and Luxury glitter like gold,
But where Beauty is bartered and Honor is sold,
Though the surface show little to shock or displease,
Yet beneath—all is Misery, Dust, and Disease.

XII.

Some attacks on the lungs, that of woe would be fall,
Are repelled by a filter of loose cotton wool;
But a barrier of brass, or a *chevaux de frise*,
Won't exclude all descriptions of Dust and Disease.

XIII.

How long will these poison-germs stifle the day?
When will Truth's blessed light shed a purified ray?
When will Phoebus send heat, or Favonius a breeze,
To destroy or disperse all this Dust and Disease?

Personal Influence.

BY REV. HENRY WARD BEECHER.

AMONG the first discriminations which men learn to make, is the difference between matter and mind; and then the difference between the forces which each exerts, or which may be exerted upon either. A smith fashions the iron on the anvil. A mother fashions the child's heart and character. And very soon men distinguish the difference between one and the other process, as a physical process on the side of the forger of iron, and as the exertion of influence rather than of force on the part of the mother.

The distinction once drawn, men begin to make larger generalizations; and moral government rises up dimly in their thoughts; and moral influence begins to be a scientific truth to them. A part of this moral influence is called *personal influence*. That is, while the minds of men, as experience teaches us, may be influenced by physical events, by the whole phenomenology of nature, yet the most potent influence that ever can rest upon the mind is of another mind acting upon it. This is the highest influence of which we know any thing at present. There is nothing, for example, that has power on your thought like a thinker thinking on you, as it were, or thinking to you. Nothing so arouses the affection as a great heart near yours. Like a fire, it sends out its warmth to all that are near it, whether they want it or not. It is a separate, independent power. Nothing so excites in themselves fear, hope, courage, desire, sorrow, admiration, hatred, disgust, or appetency as personal being on personal being. Soul on soul; heart on heart; mind on mind—that is the great power.

This is true not only of single faculties, if we subdivide the mind into its constituent elements, but a powerful personal influence has also an unconscious and formative power on the whole character. It has a regulative force on the whole life. As in the presence of one that thinks you think; as in the presence of one that is mirthful you are mirthful; as in the presence of one that is sorrowful you are sorrowful; so these actions are not confined to certain special developments. There is a general influence exerted upon man by man, which often restrains, or generally stimulates, and so is regulative or educational. Personal influence may be direct, or it may be indirect; it

may be conscious, or unperceived; it may be immediate and instant, or remote and gradual. It runs through all the categories of power. A sad nature sheds forth twilight. A merry and mirthful nature brings daylight. A suspicious, bitter nature insensibly imparts its chill to every generous soul. A bold and frank nature seems to carry its influence over all meanness. Firmness makes men firm. Fineness makes men fine. Taste directs, stimulates, and develops taste.

Personal influence may be over a single faculty, as I have said. Beethoven would doubtless have produced only a musical influence. Rabelais would have produced more the influence of mirth than of morals. Single faculties stimulate in men their like, or corresponding ones in others. But this power, or influence, of one mind upon another, is in the ratio the variety of faculties that are in combination and of the moral quality and intenseness of their action. More of being produces more effect. Intensity of being produces a correspondence of effect. Among men this intensity is rendered much greater by personal presence. Its duration and potency seem rather to depend upon instrumentality than personality. A great nature may influence you; but it is not probable that Raphael ever did influence men while he lived with his personal presence, as he has since with his pictures. It is not probable that Bacon's personal influence while he was alive was in any such ratio as his influence has been since his death. Moses was a natural legislator and leader; and yet his influence by his statutes and institutes has been far greater than the influence which he exerted when he was yet alive. Socrates had a certain influence; he stirred Athens as a spoon stirs a goblet; but Socrates would have lived almost none at all if he had not had his subsequent life through his Platonic writings. Though Christ was influential, his influence was circumscribed; but through laws, books, and institutions, his personal influence has been carried on through nearly two thousand years, and will go on to the end of the world augmenting.

So that, while you stand in the presence of a living being, and feel the throb of his heart, you feel his personal influence more intensely. But the personal influence of a man is more

endurable and more efficacious when it is exerted through longer periods of time. There is less intensity at any single moment; but there is more continuity, and more breadth, and more variety.

Again, personal influence may act upon its subjects with their consciousness, or without their knowledge. We are perpetually indebted to men, without knowing it, for much of restraint, much of thought, and many inflections of feeling. Communities are often indebted to men all their life long, whom they oppose all their life long.

But this influence does not exhaust itself here. It is not an animal quality distinctively. It is least on that side of the mind which touches the animal condition. It grows in power in proportion as you develop those faculties which discriminate between men and animals. It is strongest in the higher range of human faculties. As men go away from animal conditions toward higher spiritual development, they grow in the power of personal influence.

Hence, as we ascend the scale of being we may reasonably presume that we shall see this trait and power growing larger, clearer, more intense, more potential, with wider spheres, with still more surprising harmonies, and with far more abundant fruits. Nor is it improbable that at length we shall reach a sphere of development and a condition where there is no external law, no compulsion; where influence shall dispossess power. All beings, if such a condition there is, shall then be held true; shall be stimulated to a noble and beautiful life; shall be filled with exquisite activity, simply by the soft, silent, sweet force of being acting unconsciously on being. For, as flowers blossom, and become fragrant, and are followed by fruit, not so much by the direct exercise of power as by the solicitation of invisible warmth and sweet influences, so there shall come a time when that which we attempt to compass now by coercive laws and penalties shall be educed and secured in a higher measure, in larger spheres, and more thoroughly, and better, by simple influence, rather than by coercive power.

Personal influence acts otherwise than through the body, which is a complex instrument. When you exert your personal influence by your tongue, what do you do but call in matter, and ask it to give some interpretation to the soul. What do you do when with outstretched arms of love you call your child to you, but ask your body as its instrument, to interpret to the soul in the language of human beings, that which is an invisible power in the

soul itself? We can act through this complex instrument, the body; but there are a thousand other channels through which to exert our personal thought and feeling.

A letter is nothing but rags, with lampblack spread over it, if you resolve it to its original elements; and yet the letter, that bursts from the soul as an incarnation of its love and burning desire, going through the channels of the mail, and reaching, afar off, the soldier-boy in his camp, is more cheering to him in his sickness, and more curative to him in his wound, than all the care of the nurse, or all the medicine of the physician. A mother's word of memory and home-thoughts almost recreate life within the ribs of death under such circumstances. A letter is received from home. And what is it? A bit of paper, with ink-scrawls. Is that all? Did not the mother say, "This is I? Go for me, and speak my soul to that dear child, which I have given to my country and my God?" She did. And the message went. And was not that her personal influence? And did she not undrobe the soul, that it might touch, as it were mechanically, the other soul? Her eye, her lip, her hand, her body, as well as the letter, are various instruments by which her personal influence is exerted through symbolism.

All life, all growth, all phenomena in nature, old channels in society, may by some inspired genius be brought down and made to serve the purpose of thought and feeling.

And if such is the potency of man, if he can impress his influence upon men by these various forces of nature, of society, or of the heart, how much more can God! It is not needful that he should stand before you a living presence, nor that he should flash the glory of his substance or self on you. All nature is God's tongue. He speaks by summer and by winter. He can manifest himself by the wind, by the storm, by the calm. Whatever is sublime and potent; whatever is sweet and gentle; whatever is fear-inspiring; whatever is soothing; whatever is beautiful to the eye or repugnant to the taste—God may employ them all. And the heavens above, the procession of the seasons, as they month by month walk among the stars—these are various manifestations of God. The great all-inspiring Spirit is using, not his body, as the Pantheists teach, but his personal influence, exerted upon one and another.

Consider how even the greatest of men live, influencing but few, while thousands are not qualified to experience their influence. We

know that the influence is there, however, though men do not receive it. And God is perpetually pouring his soul through time and space, though but few know it. Not one man in a thousand understood Plato or Socrates. Not one man in a thousand ever understands a great nature, in his own age. We see this on the human plane, and how much more should we expect to see it in the divine sphere!

This personal influence, as developed in man, is in its lowest form, on account of the smallness of our nature, and its undeveloped and unregulated condition; but what an amazing power it must have when it is the being of God that exerts it! So small is man that it is not safe to let him burn on, and he stops to die that he may live again. Every twenty-four hours there are deaths and resurrections, as it were, by sleep, resting, and cleansing the old life, to bring in the new life of the next day. Easily exhausted are we, running through our periods with much friction and great difficulty, so that we must have a night with every day for recuperation. But there is no night to him that

never slumbers nor sleeps—the Watchman of eternal ages. He is the same yesterday, to-day, and for ever. And what must be the Being across whose orb are no lines of latitude or longitude; in whose soul are none of those partitions that belong to weakness; to whom duration and strength are infinite; who is as young now as when, ten thousand years ago, chaos was spread before him; and who, myriads of ages to come, will be without a wrinkle or touch of time upon the beauty of his soul!

And when such a Nature, with its infinite resources, and wondrous power, pours itself abroad, what must be its personal influence! When you, mother, can do so much; when you, lover, can do so much; when the speaker can influence you so much by his words, and his presence, how much more can He do who made the ages of men, and who lent us all that we have, and call our own, and misses it not from his infinite fullness! What a power there is in heaven! what a power there is on earth! and what auspices and auguries there are of victory in days to come!

The Education of Our Daughters.—SECOND ARTICLE.

BY MRS. E. B. OLSON, M. D.

THE question is often asked, "Is the college course which has been so long established for our sons the one best suited to meet the wants of our daughters?" In reply, we can only say that the plan for their education should be as liberal, and with as well-appointed facilities; whether it should always be precisely the same, is a matter of doubt. Indeed it is questionable whether a course of study which consumes so much time amid dead languages, is best for the majority of either men or women, when books in living tongues are so excellent and so abundant as now. Long ago, all learning was locked up in the Latin, then whoever would be educated must be able to read in that tongue, but now whatever is particularly important to be known in any language, is rendered into English. Latin was once the tongue of the three learned professions. All books pertaining to Theology, Law, and Medicine, were in this language. Sermons were preached, judicial documents drawn up, and medical prescriptions made, all in Latin. Francis the First was obliged

to abolish it from the courts of justice, because the meaning of the words could no longer be determined, and hence gave rise to new lawsuits. Medical prescriptions are still given in the Latin all over the world, and this is, for some reasons, a general convenience, though now and then an unlucky doctor or druggist makes thereby a serious, sometimes a fatal blunder. Some knowledge of Latin is important for those having a profession in prospect, especially the medical, as the scientific terms are so largely derived therefrom. Farther than this, it is not worth while for any one except professional linguists to be digging in the graves of "deceased languages," when there is so much to be learned and enjoyed from those in common use.

When the present college course was planned, the researches in science were less extensive than now. Within the last fifty years, the microscope and the telescope have opened to us a world of wonders. The heavens above, the earth beneath, and the waters under the earth, are teeming with lessons which it would be de-

lightful to learn. We should be more happy to keep company with Cicero, Homer, and Virgil, who were worthies in their day, had not a Maria Mitchell, Agassiz, Hugh Miller, and Huxley come to lure us away, and lead to brighter worlds above, beneath, around.

No one can learn every thing; something, yes, many things, must be left out of every one's head. Surely the natural sciences can bring to most more help, more continued comfort, as years go by, than the words and ways of the old Greeks and Romans. So, too, to know Trigonometry, Conic Sections, Surveying, etc., would be of service to a few, pleasant to many, but as compared with Physiology, Geometry, and Chemistry, of comparatively little practical utility. The range of science and literature is continually increasing. Valuable researches are going on, "and of the making of books there is no end," hence the question comes to each one, How much shall we try to hold on to of the past? how much shall we keep pace with in the present? Diversity of tastes, of plans for the future, should make different scholars decide differently. Schools are meeting this question and hence have their literary course, their scientific course, their special course, etc. Amid the much that we need to know, the more that it is very pleasant to know, those who are studiously inclined are apt to undertake more than they can do and do well. Especially is this true of young ladies. They are ambitious, over-sensitive, and very quick to learn. If they have entered upon the college course they want to complete it. To fail of graduation would be in their minds to admit a mental inferiority to their brothers. But do they enter school as well developed physically, and have they the freedom there which is as favorable to health as that which the sons enjoy? By no means. They bring small waists, so that the very center and source of strength and life is curtailed; the organs of digestion and respiration being restricted, to which is also added weakness of the back and pelvis, so that all kinds of muscular exercise are irksome, many of them impossible to endure. When the habits of growing girls are as favorable to health as those of the boys, it will be time enough to begin to measure strength of mind and muscle with them, though then, not to our taste to do so. There is a diversity of gifts, diversity of duties, and a diversity of organization—things which can not be weighed or measured. But to the point. Our girls enter college enfeebled by social customs, and then try to accomplish twice or thrice as much, for a "rough guess," as our boys.

MUSIC.

Music has come to be considered by most an indispensable part of a young lady's education, and hence is added to the regular course. The piano consumes more time, year after year, than any other department. Piano practice exhausts nerve-power more rapidly than any other pursuit. The eye, the ear, the touch, the emotion, together with the position, tax the brain and spinal cord. Teachers can scarce be expected to appreciate what hard work it is for most of their pupils to learn music. Proficients in the art, possess by nature more than ordinary musical ability, and acquire with ease, what comes by a slow and tedious process, to those less endowed. The fact that so few keep in practice after they cease taking lessons, shows that as soon as they can find any thing else to do, and are not spurred on to it by the inevitable lessons, it has the "go by." Probably more time is wasted at the piano than in any other way, for we have very few even tolerable operators for the time spent at the instrument.

Many persons are so enfeebled when well learned that they can not keep in practice. Others, from want of taste, or want of time, turn away from the instrument where they have been accustomed to sit hours every day for many years. I have seen many incurable invalids among those who have practised several hours a day, in addition to other studies; numbness of fingers, paralysis of one arm, chronic chorea, or St. Vitus' Dance, sight impaired, auditory nerve super-sensitive, so that the sound of the piano was painful—these and many other nervous affections, the result of much musical and mental effort combined.

DRAWING, ETC.

Our girls usually take one or more art studies in connection with their college course, and so drawing, painting, and vocal music, come in with their claims. These consume much time and strength. Beside these, young ladies usually give more attention to the religious, the esthetic, and the social culture, than young men. All these are good, all helpful if the life-force has not been so much exhausted that it can not grow by the best of aids. For instance, religious exercises come often to be a mere form, even to the devout student, who is too weary in back and brain to either think or feel, and the choicest of Scripture readings, and the most eloquent of prayers, fall on ears that have listened till they can not listen any longer. But those of us who feel that the spiritual culture is the most important part, fear to say that our

schools have too many religious exercises. But certain it is that they have *too much* of something.

DRESS.

Dress is a perplexing question, often discussed, and always brought to the "conclusion where nothing is concluded." We all want our daughters to give such attention to personal appearance as will make them acceptable. *We* think it is foolishly decided that, to attain this, they must be fashionably attired. The present style brings a multitude of changes—of things to be seen to. Were we to enumerate them it would take more pages than this journal could spare. Those who have heard Gough enumerate the articles which comprise a lady's wardrobe, till he was red in the face, breathless, and his audience convulsed with laughter, can have a faint conception of their number and variety. Now if all these things are "made to hand," the selecting, folding, arranging, and the keeping in order, not only of the person, but the boxes, drawers, and closets, take much time and thought. To be sure, it is said "our girls can't study all the time, and their dressing is a diversion." True, but much *less* invigorating than out-door amusements, such as college boys enjoy. The latter wear not only the same suit through the day, but often for successive weeks, only needing a brush for broadcloth, and one for boots, to be ready for any occasion. Our daughters must dress in the morning, dress for the gymnasium, and dress for tea. Now these three dressings must take from fifteen minutes to three-fourths of an hour each, according to her executive ability, and the elaborate character of the attire, and then scarce allow time for the suit and its belongings in the way of pins, cuffs, collars, ribbons, sashes, etc., to be properly laid away. Much of this must be done in a hurry, in order to be ready for the bell, and while it is good to quicken the circulation by occasional haste, by a good run, it is hard to hurry always. To be always "keyed up" so to speak, wears the nervous system. If girls must live to dress, why then they must, but they can not do this and have good health and good scholarship. But those who long for what is called a liberal education, should be encouraged to great simplicity of attire.

The student has from old time, had his gown for ease and freedom. Surely our scholastic girls should be allowed one equally simple and comfortable. Their present gymnasium suit, now extensively used, would answer the purpose well, and then, instead of three suits, and three periods of dressing, there need be but one for

days of study. They would be much more ready to take gymnastics if they were spared the trouble of extra dressing. Now if there is any way that they can get excused from them, they do. In every school that I have visited, many young ladies have said to me, "If we could be allowed to wear our gymnasium dresses for the evening it would be a real rest to us, so much more comfortable to study in when we are tired; but as we have to hurry into them, and then hurry out, to get ready for dinner or tea, we do not enjoy it, for it is hurry all the time." Besides this, their out-door exercise would be taken with much more enthusiasm in the short suit, though as far as length is concerned, our present street suits are very comfortable, but are, with over-skirts, when much trimmed, heavier than the gymnasium dress, and do not allow the freedom of chest which is so important to make exercise of avail. Lungs, liver, and stomach, packed away closely in corsets and tight dresses, do not get half the advantage of a walk. I know that many excellent, earnest persons, fear that our young ladies wearing the short dress, would lack the refinement of women and grow boisterous and hoidenish. I know at first it gives a sense of freedom to the limbs which prompts to fun and frisking, but when one becomes accustomed to it there is only a feeling of ease, elasticity, and comfort, and no lack of modesty of manner. I have seen many ladies of culture wear the dress for months, for purposes of health or business, and lack no refinement of bearing. And when for the hour or the day, or on their return to their usual social position, they took to their former attire, they were at ease, just as much so as if they had worn it continually. In the same manner our school girls could wear the gymnasium suit for their days of study, and on Saturday, Sunday, recreation days, and evenings of literary and social pleasures, resume the ordinary dress. This need not be an arbitrary rule, simply allowed, even encouraged, and we should soon see that the best scholars would take to wrappers, or gymnasium suits, on the days for regular lessons, and on social occasions they would be not a whit behind the rest, as to good manners, or good taste in dress. They might not be as extreme in style, but real refinement comes from within. "A maid will not forget her ornaments" on ornamental occasions. Ladies do not want to be out of style, neither would we have them forget the outward adorning. We would only free them from bondage and burdens, and make their school-days the most favorable for the most healthful culture of mind and body.

The Physique of Kaffirs, and their Habits of Life.*

OVER the south of Africa is spread a race of men famous the world over as being the best representatives of savage or uncivilized life of any found on the globe. The chief tribe of Kaffirs is called the Zulu tribe. They are dark-skinned, but not jet black like negroes, for the red blood as it courses through their bodies tinges slightly their complexion so that it is considered beautiful not only by themselves, but by Europeans who have lived among them. They are very fastidious as to the color of their skin, regarding the reddish tinge with as much pride as the white girl does the beautiful blush on her cheek, and in order to enhance its beauty they grease themselves from head to foot so as to shine very much like the patent leather of which we sometimes make our shoes.

The hair of the Kaffir is always short in both male and female, and crisp and woolly like that of the negro. Their lips are thick and their nostrils wide, yet very few would be mistaken for negroes. They have large foreheads and are very intellectual; and exceedingly fond of debate and argument. They take, no thought for the morrow. They are not revengeful in character; are hospitable, social, and fond of joking.

The Kaffir mother is kind and indulgent to her children, but twins are never desired, and when they appear, one is always sacrificed. The excuse for this is that, otherwise, something unlucky would happen to the family. Sons and daughters are treated pretty much alike. The sons are respected because they are to become warriors, and the daughters are prized because they can be sold for wives, thus becoming a source of wealth. A girl is worth from eight coins, and if very handsome twice that number. The Kaffir is free from all anxiety as to what will become of his children when grown. They have no artificial wants to work for, nor is the battle of life so sharp that there is a contest between men and men for the best places. Infanticide is unknown. There is no respect for the aged. Gray hairs are dreaded, and looked upon as a sure sign of debility.

When the young men and maidens are in the bloom of youth they afford physically as

splendid specimens of humanity as can be found anywhere. Their limbs have never been distorted by clothing, nor their forms by lacing. Each muscle and sinew has had fair play, the lungs have breathed fresh air, and active habits have given to the form a rounded perfection rarely seen elsewhere. Those who admire the human form as seen in ancient sculpture, may, among the Kaffirs, see similar forms breathing the breath of life, living statues in bronze. The only defect in their bodies is that they are a little too square-shouldered, but instances are frequently found where the slope of the neck to the arms is exactly in accordance with the rules of classic art.

The young men are very swift on foot, and possess enormous endurance. Travelers often employ them as letter-carriers, and they will take a gait half between the run and a trot and hold it to a distance of fifty, sixty, or seventy miles, almost without cessation. They perform the journey with wonderful celerity and think a couple of shillings quite sufficient pay for it. They go barefooted, yet the soles of their feet are so tough that they are rarely hurt. Among these people the foot assumes its natural proportions. The toes are never pinched by boots or shoes, and corns are unknown. Indeed diseased feet are something that Kaffirs are as unused to as they are to clothing. The foot is wide and full across the toes and the gait perfection itself.

The constant activity of the Kaffir, together with their temperate mode of life, keeps them in perfect health. They are free from most of the minor ailments that afflict civilized people and mar so much their happiness. They survive injuries that would be almost instantly fatal to Europeans. The whites who adapt their mode of life with them become quite as enduring as the Kaffirs.

The young Kaffir women are as remarkable for the beauty of their forms as the young men, and their trifling dress allows it to be shown to the best advantage. Some of the young Kaffir girls are in form so perfect, that they would have satisfied the fastidious taste of the classical sculptor. Unfortunately, this singular beauty of form is very transient, and when they have attained the age at which a white girl is in full

* The Uncivilized Races, by J. G. Wood, M. A., F.R.S. London: Rutledge & Son.

perfection of health, the Kaffir girl has lost her grace, and her beautiful form has become flabby and shapeless. A girl at twenty looks old enough to be forty. The chief drawback of their beauty lies in the fact that their faces are never handsome, for the cheek bones are too high and their noses too broad, as well as the lips too thick. The old have few or no charms as in civilized life, for they have no moral, intellectual, and spiritual beauty to take the place of lost beauty of form and grace of motion. One writer has spoken of the Kaffir women, and said, "The young girl is a sylph, and the old woman a hag."

In consequence of the different habits of life, the men and women seem hardly to belong to the same race. As a rule, the men are fine looking—fit models for the sculptor. They are tall, commanding, elastic, muscular and noble, hardly inferior to Europeans, often quite their superiors. The women on the other hand are stunted, bowed, by reason of the heavy weights they bear, and rapidly lose the symmetry of form they are noted for in their youth. They are awkward, unsightly, homely, and, nearer than any thing else, resemble, says one observer, an old, decrepid, dried, withered monkey. There may be exceptions to this rule. A rich chief may take pride in freeing his wife and daughters from the Kaffir's lot of toil and drudgery, not so much from parental love or kindness, as from motives of self-interest. The greater price which a girl who is strong and athletic brings over one who is bowed, is the motive which actuates them in relieving any members of the family from toil.

The Kaffir is very fond of dancing, and as the climate is hot and they exercise most violently, perspiration becomes abundant, and the odor is very offensive to a delicate nostril. They wear no clothing but an apron and ornaments, and when the perspiration becomes intolerable, they scrape it off with an instrument resembling a strigil. During the dance they make all the noise they can, both by the rattle of their beads and by their voices.

The diet of a Kaffir is principally milk mixed with meal. He can rarely afford meat, yet when he kills a cow, he gluts himself on it to his heart's content for the time, and then eats no more perhaps for years. They never eat new milk, but curdle it, drawing off the whey and preparing the balance so as to resemble cream in its consistency. To them this is the staff of life.

Horses have been introduced by the English, and the Kaffir has proved himself to be a superb rider. Where horses have not been introduced,

they ride the ox, guiding him by means of a stick in his nose.

It is an interesting sight to see the Kaffir at his meals. Being very social they eat in groups, as Americans do, but having no tables they squat around a fire in a circle, or in several circles should there be many of them, all facing inward. Then the pot of meal is put over the fire to boil, and while it is cooking they indulge in song in the most uproarious manner, gesticulating vigorously and bringing their elbows to their sides for the sake of emphasis. When the porridge is ready, the chief man present takes a spoon and helps himself to a spoonful of the food and then passes the same spoon to the next one, and so on till each has had his or her spoonful, when the process is repeated.

The Kaffir has a great repugnance to sick people, and is very loth to touch the bodies of the dead, and sometimes they will throw the sick into the river and let them perish, in order to save themselves from touching the body after dead. Why, say they, should it make any difference whether the sick who must die live an hour or a day more or less. The old and infirm are often abandoned in the woods to perish, with fire and food enough to last for a day or two. They do not complain of this, but accept it as their lot, and as the practice of their people; and when these abandoned ones have been found by missionaries, who have offered to rescue them, they stoutly refuse, declaring that they had rather die than be saved only to go through the same ordeal again.

Human life among the Kaffirs is not very highly valued. At the funeral of the mother of Tchaka, a despotic ruler, every male present was ordered to be put to death, and it was estimated by Mr. Flynn, who was present, that over 7,000 were slaughtered. Not satisfied with this, Tchaka ordered that every one who did not attend the funeral should also be killed, and that the earth should not be cultivated for a year, and thus, to cap the climax, ordered that if any child should be born, both it and its parents should die. Often, old and worn-out people are killed, to get them out of the way.

When we contemplate such horrors, we do not wonder that the Good Spirit who reigns over the mysteries of earth and seas allows savage nations to be blotted out before the progress of civilization. If a nation or a tribe can not conform to the genius of humanity and adopt the best modes of living and acting, nature seems to say, Let it be blotted from the face of the earth, not perhaps immediately, but in process of time—to make way for better people.

That Great Cure-all, Righteousness.

BY S. S., OR SIMPLE SIMON.

DEAR EDITOR OF THE HERALD OF HEALTH:

I DEEPLY sympathize with you in your efforts to improve the physical condition of our people, by teaching us how to cure disease, and, most of all, how to prevent it. We are truly in a deplorable condition; from the sole of the foot to the crown of the head men are sick: corns on the toes, baldness on the head, sickness at both ends, and more or less all the way between; but what shall we do about it? I have been now for more than three years on the watch for some grand remedy or prevention, that I wished to have given to the world in your columns. And I purpose briefly and sorrowfully to tell you the result of my investigations.

I first turned to systems of medicine; had great confidence in Allopathy: this was the treatment under which men were to be cured and their health preserved—good solid doses that should fix things.

A case came under my observation. A young person was in a terrible state of debility—great pain in stomach, gnawing, biting, burning like fire, etc. "A clear case of cancer in the stomach," so the doctor said; so we all believed. Not much to be done for the patient; she became insane; was given up; left pretty much alone except a little nursing, and—got well; has gone to work; has a good appetite—stomach remarkably easy for a three-year old cancer.

Next turned to Homeopathy. I was well acquainted with a young man who came home from the Army sick, and so remained. The doctor said it was nothing but liver complaint; would be up again shortly, so he said to the last. Perhaps he will, but it will be only because the resurrection takes place sooner than is generally expected in these parts; for we buried poor Harvey, a victim, so it seemed to my unpracticed eyes from the first, of consumption.

So I turned from this *pathy* and continued my search.

Now I have found it! An old man more than ninety years old walks up and down our streets with a firm step. He is straight as an arrow, although over six feet high, and stronger, apparently, than most men at fifty. I inquired his habit of life, and learned it to be this: He sleeps on a wicker bed, and goes out every morning in winter, sometimes with the thermometer twenty

degrees below zero, with nothing on but pants and shirt, barefooted and bare-headed, to a snow-bank some rod or more from the house and washes his head and neck in the snow, and then slowly walks back again. This must be the kind of treatment necessary to secure health and longevity; but before I gave it my unqualified assent, got another and much younger man to try it. And, alas! he was laid up with colds and chilblains all the rest of the winter.

I gave up my hopes in this direction with reluctance; there was something grand and heroic in the thought of living to be ninety years old, and nobody knows how much longer, conquering the hardest frosts without the aid of shoes or stockings, and being nobly indifferent to feather beds and mattresses, but I became convinced that this treatment was not the grand cure all—it wouldn't answer for delicate females; besides, mornings, with the mercury twenty degrees below zero are not always to be had even in this climate.

Next, I turned to bathing and dieting, reluctantly, it must be confessed; for if there is any thing that I enjoy, it is beefsteak. A case under my own observation again discouraged me here. Boarded in a family with a young man of good habits, regular as a clock. He was a Scotchman, and out of respect for his native land, I suppose, confined himself to oat-meal, with now and then a few other vegetable products by way of variety; when he was sick he soaked in order to get well; and when well he did the same, in order to be better. Somehow, in spite of all his washing and dieting, he became sick; broke out all over with boils; a cough set in, and he is now in his grave.

Since then I have seen a man rubbed by a magnetic "*manipulator*" until he was raw, and another one drenched with the syrups of a clairvoyant without a particle of benefit, and my investigations and my hopes are exhausted together.

What shall we do, Doctor? Must we learn a little about ourselves, exercise a little common sense, learn what is good for us, and not trust too much to any system? And, after all, wait for our perfect deliverance from sickness and pain; for the coming of the new heavens and the new earth, wherein dwelleth that grand cure-all, Righteousness? I begin to think so.

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

FRIDAY, September 22.

MRS. NORTHRUP and her sister, Miss Nellie Bowers, called yesterday afternoon, and from the time they came until they left they were constantly talking of their servants. Mrs. Northrup is a very intelligent-looking woman, and I think is really so; and she has probably fallen into this habit quite unconsciously to herself. I have met her at a number of places, and her favorite topic of conversation is always the faults of her servants, and the trials of their mistresses. The servant question is a very vexatious one, but I believe people make too much of it. And mistresses do so many things, unwittingly, to spoil their "help." One thing in particular, that operates very largely in rendering servants inefficient, is a kind of fear that their mistresses entertain of them.

A lady, already having had some trouble with servants, succeeds in finding one who pleases her. Her greatest dread is that this one may leave her, and she therefore begins to make compromises, easing her work here, giving her an extra privilege there, until the girl, at length, if she is ordinarily bright, learns that she can have the domestic affairs pretty much as she likes.

Saturday, September 23.—Henry has brought me to-day a sewing-machine, as a birth-day gift. It is of the Wilcox & Gibb's make. Aunt Minerva looks upon the advent of the machine with disapproval, for it adds to her conviction that I shall soon have nothing to do, and she thinks me idle enough already, in that I do not spend all my time in the stereotyped, old-fashioned woman's labor. Henry and I are going to drive over to father's soon, and shall return late to-night.

Sunday Afternoon, 24th.—Aunt Minerva, having become accustomed to the routine of her church here in Lightwood, we see very little of her on Sunday. She attends a prayer-meeting at 6½ A. M., Sunday-school at 9½ o'clock—(how I pity her class of young girls) then to the morning service; stays during the intermission to a Bible-class; attends an afternoon service at 1½, and an evening one at 7½ o'clock. The time that she spends at home is passed in the most gloomy and severe

manner, glancing at us if we venture a smile or playful allusion, as if we had broken the whole table of Commandments.

How pitiful it is that the followers of the same loving, charitable Master should be kept so far apart by prejudice, education, natural temperament, etc.! I hope the time may come when Aunt Minerva will understand us better. Surely, we need not complain at being misunderstood, when so many better people than we have been maligned.

Good Dr. Hutton, a man of great spirituality, had at one time living in his family a distant relative, of the Methodist persuasion. During the last illness of this lady, a prominent female member of the Methodist Church came in to pray with her departing sister. In the course of her prayer she waxed louder and louder, until the attention of the whole household was attracted. Gathering in the upper hall, Dr. Hutton and his family heard themselves prayed for in the most earnest manner, as being still in the bondage of sin. Repeatedly was the petition made that Dr. Hutton might be converted. Another instance, of rather an amusing nature to outsiders, occurred last winter in this village. One evening the Baptist minister came into a Methodist revival meeting, and had hardly comfortably seated himself, when he was astonished by a prayer from his Methodist brother in the ministry for his speedy conversion. The Baptist brother did not lose his opportunity, but gave the gathered assembly an earnest and spicy exhortation upon the duty and advantages of charity.

No body of Christians can claim to be free from this fault; they all have their bigots, and it will always be so until individual Christians obtain a clearer idea of Christ's beautiful and tender liberality.

Monday, 25th.—At father's, on my birth-day, I received a number of useful presents, of the labor-saving class. The buggy was quite full of them when we came home.

Yesterday, at church, we heard of young Mr. Osborn's discharge from the bank, on account of his persistence in his bad habits. What a pitiable prospect for his wife! They had no means of support but his salary, and they have two children, mere babies. Henry spent part

of yesterday afternoon with him, trying to induce him to take a firm stand against his evil habits, and Dr. Hutton was also with him. Aunt Minerva did not let the occasion slip, but discoursed to me severely upon the sin of Sunday visiting.

Friday, 29th.—Madge must have spent her time since she came to us in finding new and inconvenient places for the culinary articles. She is certainly very ingenious and successful, and I think is constantly improving in the art of disarranging things. She often reminds me of my delight, when at school, at reaching the rule of permutation in my old Greenleaf's arithmetic, and finding that a small number of things would undergo so many changes of position. My only regret was that Mr. Greenleaf had not made more of the fascinating example.

Madge's skill in the practice of the rule of permutation suggests the thought that she has been deceiving us as to her want of education, and that she is a ready und accomplished mathematician. When I go into the kitchen to cook, I find the necessary articles so displaced that I have to spend some time in looking for them. There is no use in sending Madge for them, as I can find them sooner than she. While going through the search I often think of an example like the following, and how interesting it would have been to me in my school-days. In the pantry, opening out of the kitchen, are twenty-three nails. Upon these nails are hung two sauce-pans, three iron spoons, one potato-masher, one egg-beater, one toasting-fork, one cake-turner, one bunch of muffin-rings, four tin dippers and measures, two skimmers, one steamer, colander, one strainer, and four baking-pans. If a person should remove them without noticing their order, what would be the possibility of her replacing them in the same position they were in at first?

If Madge would only stop at this series of changes, I might become accustomed to it, but once a week she has a zealous "clarin' up," when she sometimes removes a portion of the articles to remote corners of upper shelves, and even sometimes to a small milk-room, which was used by the family who lived here before us. When I discover this kind of change I immediately insist upon the return of the traveled tins to their row of nails, and this of course necessitates another change.

Saturday, September 30.—There are two ladies among Henry's patients, who have young babies, only a few weeks old, and I have been so

interested in their different management. Mrs. Ellis is in a continual state of tribulation about her's; it is a great, fine, healthy child, but if it only sneezes she is alarmed, and consults her different female friends. She keeps it in one room, carefully shielded from even a breath of air, wrapped up like a mummy, and surrounded with cups, bottles, night-lamps, etc. Catnip tea, soothing-syrups, and about every thing she has ever heard of, have already found their way down the poor child's throat. She used to be very particular about her personal appearance, but now she entirely neglects this, and may be found at any time in a wrapper, with disordered hair, and with as anxious and careworn an air as the President of the United States would be justified in wearing. I ran in yesterday, and found her in a great state of excitement, because the baby had the *snuffles*! She wanted to know if I ever heard of a baby dying of this disease; and after her mind was a little relieved she asked further advice. I felt very delicate about giving her the advice upon my tongue's end, but she had given me the opportunity, and I improved it by saying: "Mrs. Ellis, I hope you will not think me presuming in what I say; you might easily do so, because I am young, and not having any children of my own, might be supposed not to know any thing about them. But I have had some experience in taking care of my sister's children, and I know that you are making yourself a great deal of unnecessary trouble, and denying yourself much enjoyment which you might just as well have." And then I went into particulars, advising her to take the baby about the house, to spend her evenings down stairs with her husband, etc., all of which advice she received so pleasantly that I am sure I have given no offense, and may have done some good.

Mrs. Mason is a perfect contrast to Mrs. Ellis. She is a little, young creature; has seen very little of children, being an only daughter, but she has so much healthy, practical common sense in her composition that she, so far, makes an excellent nurse and mother. She is so small and youthful in her appearance that, seeing her with her baby, one involuntarily thinks of a little girl playing with her doll; but her play is of a most orderly and systematic character. She is thoroughly warm-hearted and motherly, but she knows that it is not essential to make herself a slave to her child. She seems to have hit the happy medium between excessive devotion and carelessness.

Monday, October 2.—Henry read to me to-day

an item from a reliable newspaper, which, if true, may account for Dr. Sike's possession of a diploma. We could not understand his having one, for his practice among the people shows his entire ignorance of what to do for the sick. This paragraph made the statement that there was one place in our country at which medical diplomas could be bought, and no questions asked as to the qualifications of the buyer, just as in England sermons are made an article of merchandising.

Wednesday, the 4th.—To-day I received the first instalment of money from Aunt Betsey's estate. The first thought is how to dispose of it. There is no difficulty in finding objects to bestow money upon, but it is difficult to make the right choice among them. Another question arises: Is it better to use one's money in personal charity, or to give it to organized associations for doing good? It seems to me there are strong arguments in favor of each side of the question, and my plan will be to give in both ways.

Thursday, October 5.—Mrs. Fidler, of Burtonville, surprised us to-day with a visit, none the less welcome because unexpected. She is a constantly amusing person, but so good that nobody ever has an unkind word to say of her. Mr. Fidler is as amusing as his wife; their very faces are mirth-provoking. They brought us some butter and fresh eggs from their farm. Mrs. Fidler came to the door loaded, exclaiming, "Here, Annie; I've brought you some of my nice butter, jest's as yaller as gold, an' sweet as roses. I told Samocel we must bring you something to remember us by. An' what do you think? We've all been sick with the measles. Ruby Jane, Aurora Maria, and Semanthy Belinda was the worst of any; but we've all had a sick time of it." So the day passed in a continual string of news and simple remarks, about all sorts of subjects. But I feel as if a day spent with Mrs. Fidler was a good investment of time, for two reasons; one that it does a person good sometimes to laugh, as I have to-day, and the other that her kindness and lovingness are contagious. Her youngest child, Solencia Philena, she brought with her, but we saw little of her, as Madge took possession of her, and kept her in the kitchen most of the day. Mrs. Fidler noticed my new sewing-machine, and remarked, "So, you've got a sewin'-machine; and, did you ever! I've got one, too. Samocel said I'd done the sewin' for eleven children long enough, and one day he came in

a bringin' in a machine, and a long-haired man that he called the agent. An', laws sake! the agent, he talked away as slick and smooth as could be, and sewed all the scraps the children would bring him full of cotton. He said he was instructin' me, an' I kept a sayin' 'yes, yes,' jest's if I understood every thing he said, an' all the time I was a thinkin' about the dinner. After he was gone, and the girls an' me had got tidied up, I set down to the machine, took the little book of directions out of the drawer, and began to read: 'Put the robbin on the win-der,' was the first words. 'Well, what does that mean?' says I to myself. I guess there must be a sewin' bird to this machine, an' I set to work an' looked all through the drawer, but I couldn't find no sewin' bird; an' then I looked in the book, an' I read jest's plain as ever: 'Put the robbin on the win-der.' An I jest had to give it up. As luck would have it, Cousin Florinda came over the next day, an' when she looked at the book, says she, a laughin', 'How stupid you was; 'taint 'robbin on the win-der' at all, it's 'put the bobbin on the wind-er.'" And then she showed me all about it, and now the machine goes like a book, an' 'tain't no trouble at all to make things on it."

Mrs. Mackenzie called while Mrs. Fidler was here, and it was difficult to control my propensity to laugh at the contrast. Mrs. Mackenzie is a woman of very narrow capacity, capable of appreciating nothing but social position, and stiff precision of manner. She looked at Mrs. Fidler as if she had just escaped from a menagerie, and all the time, dear, unsuspecting Mrs. Fidler was talking to her in her illiterate but warm-hearted way, without any consciousness of Mrs. Mackenzie's feelings.

The little Solencia Philena was called in from the kitchen, to exhibit her accomplishments to Mrs. Mackenzie, but no amount of coaxing from her mother could draw forth "Twinkle, twinkle, little star," from the child's mouth. It was evident that she, with true child's instinct, felt the coldness and artificialness of this woman, where the mother did not perceive them.

Sunday, October 8.—This afternoon, after church, I went to see little Mary Morgan, the child of very poor parents, who has been sick, and a cripple, since she was a year old. She is now nine years of age. She is a remarkable instance of contentment and patience, and I was struck by her satisfaction in and enjoyment of the few poor little playthings which she had. One's first impulse is to supply such a child with the many toys that a few dollars could

buy, but I am satisfied it is not the right course. When she found herself supplied with the *muck*, the spell of her sweet "contentment with little" would be broken. Judgment must therefore be employed in making her one of the objects of Aunt Betsey's charity. Better food she must have, more nourishing and strengthening, and an occasional toy or book; and rides she must have, and flowers. And this reminds me of the plan that has been floating in my mind for some time, of having a gentle horse, and a low, broad-seated carriage for my own use. I might

confer a great deal of pleasure, and accomplish real good in the way of making people more healthy, by giving rides to those who have not the means to provide themselves with them.

And how much this matter of good health has to do with our happiness! Some people need to think more of the subject, and others less than they do. Health may be considered in such an unhealthy way as to become the subject of one's gloomiest thoughts, and it may be thoughtlessly or wilfully neglected.

How to Prepare Cow's Milk for Babes.

BY A MOTHER.

A LADY, who was unable to suckle her babes, reared a large family of healthy children, according to the plan so carefully laid down by Dr. Cummings, in his little volume called "Food for Babes," published by Randolph, New York, 1859. This work being out of print in this country, and her copy nearly worn out in service, she offers a synopsis of its contents to THE HERALD OF HEALTH, for the benefit of those needing such information.

The book has been recently republished in Scotland, and it is hoped that it may reappear in this country, for there is much useful matter in it not to be found in the outline here given. Happy the mother who can suckle her own child! But how can a feeble woman whose digestion hardly suffices for the support of her own body be an efficient nurse? Her milk is likely to be deficient in important materials. A strong, healthy woman, supplied with as much wholesome food as she can eat, can not do more than supply her child; and generally loses weight while suckling. A vigorous child takes about three and one-half pounds of milk daily; or twelve hundred pounds a year. Supposing a woman to weigh one hundred and thirty-two pounds she must give nine times her weight in the course of the year, and, as many mothers give less than half this amount, their children must suffer, unless a good substitute be found. This can be found only in the milk of animals, and not in starch, flour, or similar substances.

ARTIFICIAL HUMAN MILK.

The question is how to modify cow's milk to make it suitable for a new-born infant; it having been found to disagree in its pure state.

There is in the first place too much casein, or cheese, in cow's milk, and the child can not digest it; to reduce it to the true proportion, nearly twice as much water as milk is necessary; to be exact, it must be eighteen parts of water to ten parts of milk; but this would reduce the quantity of butter also without which the child would not thrive. The milk to be diluted must therefore contain more butter than ordinary milk, which must be obtained by setting aside, say, three quarts of milk, and at the end of four or five hours remove the upper quart; the upper third of any quantity of milk containing fifty per cent. more butter than the ordinary milk of the cow. The same result can be obtained by taking the "strippings," or latter half of the cow's milking. This milk, when diluted, with one and a half parts water, and properly sweetened, resembles ordinary human milk.

VARIOUS DILUTIONS FOR VARIOUS AGES.

Mother's milk for new-born babes is so peculiar as to have got a special name, *colostrum*. It gradually loses these peculiarities. For *colostrum*, or milk prepared for the first two weeks of a child's life, must contain more butter—the upper eighth, instead of the upper third must be used. From two quarts of milk, which has stood four or five hours, skim off carefully half a pint; or the last tenth of milk just stripped from a cow. For example, if a cow gives five quarts, the last pint may be used. This milk must be largely diluted with water, according to the following schedule. Milk is to be made more nutritious as the child advances in age, regard being had not to mere age, however, but to the condition of the child; the schedule being ar-

raised to suit vigorous children, and will not suit feeble ones, who must be kept back on the scale.

SCHEDULE.

AGE.	MILK.	WATER.	WHOLE
	Gills.	Gills.	QUANTITY.
			Gills.
2 to 10 days.....	1 $\frac{1}{4}$	3 $\frac{1}{4}$	4 $\frac{1}{2}$
10 to 20 days.....	1 $\frac{3}{4}$	4 $\frac{1}{4}$	6
20 to 30 days.....	2 $\frac{1}{2}$	6.....	8 $\frac{1}{2}$
1 to 1 $\frac{1}{2}$ months...	3.....	6 $\frac{3}{4}$	9 $\frac{3}{4}$
1 to 2 months...	3 $\frac{1}{2}$	7.....	10 $\frac{1}{2}$
1 to 2 $\frac{1}{2}$ months...	4.....	7 $\frac{1}{2}$	11 $\frac{1}{2}$
2 $\frac{1}{2}$ to 3 months...	4 $\frac{1}{2}$	do.....	12
3 to 3 $\frac{1}{2}$ months...	5.....	do.....	12 $\frac{1}{2}$
3 $\frac{1}{2}$ to 4 months...	5 $\frac{1}{2}$	do.....	13
4 to 4 $\frac{1}{2}$ months...	6.....	do.....	13 $\frac{1}{2}$
4 $\frac{1}{2}$ to 5 months...	6 $\frac{1}{2}$	do.....	14
5 to 6 months...	7.....	7.....	14
6 to 7 months...	7.....	7.....	14
7 to 8 months...	8.....	6.....	14
8 to 9 months...	8 $\frac{1}{4}$	6.....	14 $\frac{1}{4}$
9 to 10 months...	8 $\frac{1}{2}$	6.....	14 $\frac{1}{2}$
10 to 11 months...	8 $\frac{3}{4}$	6 $\frac{1}{4}$	14 $\frac{1}{2}$
11 to 12 months...	9.....	5 $\frac{1}{2}$	14 $\frac{1}{2}$
12 to 15 months...	9 $\frac{1}{4}$	5 $\frac{1}{4}$	14 $\frac{1}{2}$
15 to 18 months...	9 $\frac{1}{2}$	5.....	14 $\frac{1}{2}$
18 months...	10.....	5.....	15

Eight large spoonfuls are about a gill.

REGULATIONS OF THE QUALITY OF THE MILK.

If the milk be too strong, indigestion will follow, and the child will lose instead of gaining strength. When particles of casein, or curd, pass through his bowels unaltered, a milder quality or lower grade should be substituted. A feeble child of six months may require the food suited to a vigorous child of six months. For constipation, increase the richness of the milk, put in more cream. In cold weather, or if milk is kept on ice, it may stand an hour or two longer before the upper third is removed; or the upper fourth may be taken, or set five quarts instead of three to get one quart.

The water used in diluting milk should not be hard; nor should it be boiled. Add it to the milk, and heat it by putting the bottle in warm water.

SWEETENING.—Use loaf sugar, enough to make it as sweet as undiluted new milk, a tea-spoonful to a quart. If too sweet, it will cloy the appetite, and not enough food will be taken.

TEMPERATURE.—The milk should be heated to one hundred degrees Fahrenheit; test it once, and try it on the cheek; which should regulate it subsequently.

The mode of feeding should be by suction from a bottle; with the long rubber tubes which

are attached to the improved nursing-bottles, the infant can lie down, and will fall to sleep quietly in his crib.

QUANTITY.—For the first ten days, about one to one and a half pints a day should be given; before the end of the first month the child will take more than a quart daily; at the age of three months he may require two quarts daily. After that time the quality will change more than the quantity. The child will need half a pint at a time every three or four hours, which should be sucked in about ten minutes, and he will pass six or eight hours at night without feeding.

The bottles should be annealed by being put into cold water and boiled three or four hours, and the most scrupulous care observed in cleaning them.

WHAT THE BRAIN FURNISHES.—The brain is the great electrical reservoir of the body and furnishes electricity to all the nerves, without which not one of the numerous functions would be performed. Every nerve, however small, constitutes a perfect magnet, and in health represents the two forces, positive and negative, in equilibrium. A disturbance of these electrical forces in the atmosphere is the cause of the convulsions of nature. When it moves according to natural laws, it bids the seed to arise from the earth, to bring forth its flowers and its fruits, to breathe its balmy fragrance over the bosom of nature. When its equalization is disturbed we see it flashing in the clouds, and hear its thundering voice roaring above us, and yet that same voice showers down upon us the blessing of the rain-drop. It is this same electrical power from whose lips falls the dew when night covers the earth with her sable mantle, and the same agent which basks in the sunbeams, while they impart a fragrance to the flowers, and the luscious taste to the fruits. It is the loss of this power that causes our death. So all the organs of the body are affected, controlled, and acted upon by this subtle fluid. We know that the nervous fluid and electricity are one and the same, for by severing the hypogastric nerve digestion will cease because deprived of its vital force from the brain; but if a current from a battery is applied to the nerve below the separation, digestion will go on uninterruptedly. Experiments made in Paris proved that digestion can be carried on in animals even after life is extinct, by a proper application of the galvanic current.—*Mrs. S. E. Merrit, M. D.*

STUDIES IN HYGIENE.

THE SEVEN BEST DISINFECTANTS, AND HOW TO USE THEM.—

PERMANGANATE OF POTASH.—One part of the pure salt is dissolved in one hundred parts of water. Where the crude material is used, five to ten parts of it to one hundred of water will suffice. This disinfectant acts upon liquids, and has little effect on solids.

CARBOLIC ACID WATER is obtained by dissolving one part of pure crystallized carbolic acid (which can be rendered fluid by immersion in hot water) in one hundred parts of water. Crude carbolic acid should be taken in double the quantity.

CARBOLIC ACID POWDER is prepared by mixing one hundred parts peat, gypsum, earth, sand, sawdust, or charcoal powder, with one part carbolic acid dissolved in water. Double the quantity of crude acid must be taken.

CARBOLIC ACID WASH.—Mix one part carbolic acid with one hundred parts milk of lime.

CHLORIDE OF LIME.—One part in one hundred of water.

SOLUTION OF METALLIC SALTS.—Better to prepare saturated solutions in water and frequently stir.

SUEVERN'S MASS is composed of one hundred parts of slaked lime, fifteen parts coal tar, and fifteen parts chloride of magnesium dissolved in water.

The above list of disinfectants and their preparation will be found highly serviceable and should not be forgotten. In many cases it may be worth more than the entire cost of this magazine for a year.

FACTS ABOUT SLEEP.—My own researches on the proximate cause of sleep—researches which of late years have been steadily pursued—lead me to the conclusion that none of the theories as yet offered account correctly for the natural phenomena of sleep; although I must express that some of them are based on well-defined facts. It is perfectly true that exhaustion of the brain will induce phenomena so closely allied to the phenomena of natural sleep, that no one could tell the artificially-induced from the natural sleep; and it is equally true that pressure upon the brain will also lead

to a state of sleep simulating the natural. For example, in a young animal, a pigeon, I can induce the deepest sleep by exposing the brain to the influence of extreme cold. I have had a bird sleeping calmly for ten hours under the local influence of cold. During this time the state of the brain is one of extreme bloodlessness, and when the cold is cautiously withdrawn and the brain is allowed to refill gently with blood, the sleep passes away. This is clear enough, and the cold, it may be urged, produces contraction of the brain substance and of the vessels, with diminution of blood, and with sleep as the result. But if when the animal is awaking from this sleep induced by cold, I apply warmth, for the unsealing of the parts, a little too freely, so that is to say, I restore the natural warmth too quickly, then the animal falls asleep again under an opposite condition; for now into the relaxed vessels of the brain the heart injects blood so freely that the vessels, in like manner as when the frozen hand is held near the fire, become engorged with blood, there is congestion, there is pressure, and there is sleep.—*Dr. Richardson.*

POLITICAL HYGIENE.—Dehortation against war and its concomitants, rapine, and its cruelty, must always be commended; but of still greater moment should be the discouragements held forth against the nursing of prejudices, and an extreme sensitiveness to imaginary insults, under the workings of which a people sometimes snatch at an excuse for war. It can not be expected that the whole population of a country should be put under a cooling regimen, and lose a little blood from the arm, for the purpose of reducing the national fever; but derivatives might be usefully employed which would turn public excitement into the walks of peaceful ambition, by the cultivation of the arts and sciences, and the erection of public works, useful and commemorative. At any rate, it would be very desirable for rulers of the state, and other members of the government—legislators, and especially political orators and agitators—to submit themselves, in seasons of threatened moral epidemics, to a dietetic course, in which artificial stimulants, and particularly whisky, should find no place. Voltaire witily said that wars have been brought on be-

cause a minister of state could not procure a fool. Some years back, at a time when the question of boundary between the United States and Canada was warmly discussed, a war speech, which alarmed the whole country, was made in Congress by an eminent political leader and orator, who was intoxicated at the time.—*Medical Times*.

NAKED TRUTH.—If the great Truth so beautifully incarnated in the Parable of the Prodigal Son had been presented in a naked, abstract form, how much of its power would have been lost! How little of it would have been secured! But, embodied as it is, in one of the sweetest stories ever told, it will be cherished as long as there are human hearts and human sensibilities and sympathies to cling around it; and they will cling around it, with the perennial greenness and freshness of the ivy. "Love thy neighbor as thyself." How plain and simple and reasonable this precept now seems to us! But its truth had been but feebly felt and dimly recognized, even by the greatest legislators, philosophers, and moralists of the ancient world. It was not until the divine Nazarene lived it, and through the concrete form in which he presented it to the world, of the story of the good Samaritan, breathed into it a fructifying power, that it bloomed into a celestial beauty and filled the earth with a celestial fragrance.—*Cornell Era*.

PROLONGED VIGILS.—Leibnitz sometimes passed three consecutive days and nights in the same chair, resolving a problem that interested him; an excellent custom, as Fontenelle observes, to accomplish a labor, but a very unhealthy one. The Abbe de La Caille, a famous astronomer, had a fork invented in which he adjusted his head, and in this position passed the night in astronomical observations, without knowing, as a man of wit observes, any other enemies than sleep and the clouds, without suspecting that there could be any more delightful way of employing these silent hours which revealed to him the harmony of the universe. Thus he contracted an inflammation of the lungs which carried him off in a short time. Giradet did not like to labor during the day. Seized in the middle of the night by a fever of inspiration he arose, lit the chandelier suspended in his studios, placed upon his head an enormous hat covered with candles, and in this strange costume he painted for hours. No one ever had a feebler constitution, or a more disordered state of health than Giradet.—*Medical Independent*.

EATING TOO FAST.—Eating too fast, generally involves eating too much—more than is needed for the support and nutrition of the body, and the reason for this is, that the organs of taste which are our guide in this matter, are not allowed sufficient voice; they are not allowed time to take cognizance of the presence of food ere it is pushed past them into the recesses of the stomach. They do not therefore have opportunity to represent the real needs of the system, and hence allow the crowding of the stomach. I hold that thirty minutes should be spent at each meal, and spent too, in chewing the food a good portion of the time, and not in continued putting in and swallowing, but in pleasant chat and laugh instead of a continuance of the intense nervous pressure of the office or library. If you lay out to spend thirty minutes in this way at your meals, you may rest assured you will not eat too much, and that what you do eat will be in the best conditions for appropriation to the needs of your system. You will be healthier in body, happier in mind and more vigorous of brain—for there are few things that so clog the brain as a meal of half eaten food put into the stomach.—*Dr. J. H. Jackson*.

OPEN THE DOORS.—Where there are children, it is of great importance that rooms and entries should be of the same temperature, for certainly a large proportion of the chest and bowel affections of the young can be traced to a change in temperature, especially where the little ones are in the habit of passing from overwarmed rooms into somewhat underwarmed entries.

There is no need to dilate on the necessity of ventilation; but even where stoves are used, and a certain ventilation is thus afforded, our remarks hold true, for there is no doubt that all ordinary modes of burning anthracite coal pour into our rooms so much of the inodorous, tasteless, poisonous carbonic oxide, that we can hardly have too much air with which to dilute it.

So we put in a plea that instruction be given to our young folks somewhat different from that which their forefathers received. Teach them by all means to be obedient and docile, but forgive them if doors be left ajar; nay, more—teach them to leave them open.—*Medical Times*.

WHY is a man in fever like a burning candle? He is light-headed.

WHY is a man who has no children invisible? Because he's not a parent.

RECIPES FOR WHOLESOME COOKING.

LEMON PIE--A Correction.

In the March number of *THE HERALD OF HEALTH* we published a recipe for making Lemon Pie, which we hope none of our readers will ever try. The idea of using a "cup of vinegar" for each lemon is quite too absurd for any thoughtful person to practice on. Printers and proof-readers, like all the rest of the world, are sometimes human, and when they are, some very queer blunders are made, as in this instance, when *vinegar* was substituted for *sugar*. If our friends will try the recipe with sugar instead of vinegar, they will, we think, like the pie. We republish the recipe below as it should have been published.

LEMON PIE.—For each peeled and grated lemon add one tea-cup of sugar, and one table-spoonful of corn-starch dissolved in cold water. Over this pour a tea-cup of boiling water.

CAUST.—One part white flour, one part graham flour, one part corn-meal. Shorten it with butter or condensed milk, reduced one-third. Use two crusts.

The above recipe for lemon pie is used in our Institution, and a majority of our guests will testify as to the excellence of lemon pie made in this way.

ANOTHER RECIPE.—Mrs. H. C. Birdsall sends us another recipe for making Lemon Pie, which she informs us is excellent. We give it below:

Take two lemons, two eggs, one cup of sugar, one cup of water, and one large table-spoonful of flour. After grating the peel, take off and throw away the white rind, and cut the lemon in small pieces, carefully picking out the seeds. After the under crust is laid in, sugar it well. Bake with two crusts.

ANOTHER CORRECTION.—In the recipe of Mrs. Lissie B. Bronson, "No. 10, Cracked Wheat," for a "quart of cracked grain," read "a pint."

GRAHAM CRACKERS.

Wet the best of graham flour with cold milk, adding about a fifth proportion of thick cream or a little butter if cream is not to be had. Mix as soft as can be handled; knead very thoroughly, say fifteen or twenty minutes; roll thin; cut in three-inch-square cards; lay, so they will not touch each other, on a hot sheet-iron pan, and bake quickly, say ten or fifteen or twenty minutes, according to thickness. Handle carefully while hot, and pack away when cold in tin cans or stone jars in a cool, dry place.—*F. J. B., in Laws of Life.*

NOTE.—For the convenience of those who have not an opportunity of weighing the ingredients for the soups, it may be stated, that one large table-spoonful will be about equal to one ounce; and one tea-spoonful to a quarter of an ounce. But weighing should be resorted to, whenever it is possible.

SOUPS.

Generally the American people are not fond of soups: perhaps because they are seldom well made, and when they are they are often complicated and expensive, requiring much money, time, and attention to prepare them. These difficulties are avoided in the following recipes, and a few trials will enable any one of ordinary understanding, who will follow the directions, to produce cheap, wholesome, and agreeable soups, without shins, knuckles, scrags, bacon, or drippings.

No. 1. PEA SOUP.—Put one pint of split peas, which have been previously soaked in cold water four hours, into two quarts of pure soft water. (Distilled, or filtered rain-water is preferable when it can be obtained.) Let them boil for one hour, then add one carrot, one parsnip, one turnip, two onions, a small head of celery, and a little mint, all cut small, and boil the whole another hour. Strain the soup from the vegetables, and thicken it with a little Indian-meal, previously mixed in cold water; boil the whole for ten minutes more, and serve in a tureen with toasted or plain wheat-meal bread. (Mix the vegetables well, and put them into a mold or a basin and then into a vegetable-dish, and serve it with steamed or baked potatoes, which are better than when boiled in water.)

No. 2. BEAN SOUP.—Wash and pick one pint of white beans; steep them twenty-four hours in pure soft water, put them into a stew-pan (earthen, enameled is best), set them on the fire in two quarts of water, let them boil for two hours, then add two onions, one parsnip, one carrot, a little parsley and thyme cut small, a little cold boiled rice, and a little salt. Boil the whole gently for another hour, and serve it the same as pea soup.

No. 3. BARLEY AND BREAD SOUP.—Take three ounces of barley, one and a half ounces of stale bread-crumbs, one and a half ounces of butter, one-half ounce of salt, and one-quarter ounce of parsley. Wash and steep the barley for twelve hours, in one-half pint of water, to which a piece of carbonate of soda, the size of a pea, has been added; then pour off the water not absorbed, and add the crumbs of stale bread, three quarts of boiling water, and the salt. Digest these in a salt-glazed covered jar, in the oven, or boil them slowly in a well-tinned covered pan, for from four to six hours, adding the chopped parsley, with the butter, thirty minutes before the expiration of the time of boiling.

No. 4. HOTCH-POTCH SOUP.—Take four large turnips, one pound of carrots, one onion, one lettuce, and parsley. Put four quarts of water into a pan, set it on the fire, and put in the carrots and turnips, part of which must be grated, and the remainder cut in small square pieces with the other vegetables, all cut small; season, and let all boil very well together slowly. Young green peas may be added, part of them to be put in with the other vegetables, and the remainder about an hour before the soup is ready.

EDITORIAL DEPARTMENT.



NEW YORK, APRIL, 1871.

WATER.

"To the days of the aged it addeth length ;
To the might of the strong it addeth strength ;
It freshens the heart, it brightens the sight ;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as indebted for every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.

Exchanges are at liberty to copy from this magazine by giving due credit to THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

WEEDING OUT THE COWARDS.—There is a large tribe of savages in Africa who devote themselves all their lives to the arts of war. The king claims the services of all the males, and most of them belong to his army. The warriors go into battle nearly naked, and their only protection is a shield made of the hide of the ox, and their only weapon a sort of javelin, which they hurl with great dexterity at the enemy. In battle, the young men are put in front, that they may have a chance to distinguish themselves and be promoted. Promotion consists in being allowed to bear a white shield instead of a black one, to stand in the ranks of the brave men, and to be allowed to marry a

wife without paying for her, as those not in the service must do. After a battle, the king reviews his soldiers, promotes all who have been brave, but without ceremony kills all who have been in any way cowardly in their behavior. The cowards are not tried by any law, but are simply pointed out by those who have observed them, and are at once executed. They march to their fate without resistance, knowing that there is no reprieve. Thus cruelly and unmercifully do savages weed out the cowards and worthless soldiers, and secure a brave class of men with which to conquer their enemies.

There is no doubt but that the physical vigor always noticeable among savages is in a great part due to the elimination of the weak and effeminate by some such means as that practised by the Zulu tribes of Africa. It is a savage and fearful way of promoting the physical well-being of the race, and we almost wonder that a similar method was long practised among the Greeks, whose superior physique was, perhaps, due quite as much to the barbarous practice of weeding out the feeble and infirm children, as by their superior methods of physical culture.

Among civilized races, on the other hand, exactly the reverse methods are taken with those who are vicious, idle, cowardly, and, we might truthfully add, worthless. We build hospitals for the sick and infirm who have no homes of their own to live in. Our imbecile population are educated in schools adapted to their needs. We burden ourselves with the paupers of intemperance, want, and misery, and build them poor-houses, where they may live in tolerable comfort, and, if sick, our best physicians try to prolong their lives to the last moment.

It seems to be a chief peculiarity of our gospel of love, that we can not do too much for the unfortunate. We can not be happy ourselves if those around us are miserable. We

must bind up the broken hearts and heads, and leave vengeance in the hands of God. Still, notwithstanding our efforts to reclaim those who are worth little or nothing to civilization, Nature does something in the way of elimination, so that very few of the vicious leave offspring of their own kind to curse the world. According to Darwin, malefactors are executed and imprisoned, so that they can not transmit without hinderance their bad qualities; melancholy and insane persons are confined, or commit suicide; violent or quarrelsome persons come to some bad end. Restless men, who will not follow any occupation, go to new countries as pioneers. Intemperance kills its victims early. Profligate women bear few or no children, and profligate men rarely marry, and the same is true with those who are weak of constitution, or suffer with bodily infirmity.

Thus we see that Nature, in her own quiet way, helps to weed out the worst classes and assists human progress, and how infinitely more perfect is her way than that of the savage who kills on the spot all the cowards, or that of the Greek who does not allow weakly and deformed children to live.

It is very true that multitudes of the good also leave no offspring, a fact bitterly regretted, and, as has been observed by many writers, the degraded often become parents of large families, but, according to the author before mentioned, their children rarely all live, and in a generation or two, unless isolated from civilization, they become extinct. According to Mr. Greg, "the careless, squalid, unaspiring Irishman may multiply like rabbits, yet the ambitious, self-respecting Scotchman, who marries late and has but few children, outstrips him in wealth and intellect, and power, if he does not in numbers. The Irish increase in numbers nearly six times as rapidly as the Scotch, but the latter far exceed the former in thrift.

Thus it is that Nature manages her affairs. Slowly, but surely, the good, the brave, and the strong win and inherit the earth, while the wicked, the weak, and the vagrant perish and are forgotten.

THE OLDEST DOCTOR IN AMERICA.—We have recently noticed the great vigor of German soldiers and French statesmen at very advanced ages, but America is not to be beaten in regard to the vigor of its old men, as the following case will attest.

The Richmond and Louisville Medical Journal states that the oldest practising physician in America is Dr. Theophilus Clark, of Tinmouth, Vt. He is ninety-eight years of age, has been practising continuously sixty-six years, is hale and hearty, and has no thought of giving up business yet.

We may, in this connection, mention M. Thiers, who, as President of the new Provisional Government of France, is again brought conspicuously before the public, is seventy-three years old; yet, but for his white hair, no one would suppose him more than sixty; and the vivacity of his movements, his remarkable activity, and his full, healthy face indicate the fully rounded prime of manhood rather than its decline. Nothing in his appearance exhibits the scholar, the orator, or the statesman; rather he has the practical, matter-of-fact aspect of a lawyer. The most striking feature of the man is a pair of lustrous, piercing, eyes, which seem not only to see every thing, but to see through whatever they are fixed upon. He combines boldness with caution, sagacity with decisiveness, the dash and brilliancy of his race with a conservatism solidified by experience; and having the confidence of all parties, he seems to have been providentially spared to render the most important service in the regeneration of his country.

The case of the famous Dr. Ricord is another instance of great vigor at advanced age. In the terrible sortie of November the 30th, the most distinguished services to the wounded were rendered by this renowned man. Having established his headquarters in a ruined hut, he awaited the arrival of the *brancards* with their unhappy freight. As each poor sufferer was brought in, he gently but rapidly relieved him of his clothes, dressed his wound, or applied the splint to his shattered limb, as the case might be, placed him on his shelf, and had him con-

veyed by ambulance wagon to the steamers which were moored on the Marne, by Joinville. As soon as the boat had taken in as many as it could hold, it steamed swiftly down stream to the bridge near the Bastille, whence the *brancards* bore the patients to the hospitals or to the private houses which had been prepared for their reception. For hours and hours Dr. Ricord continued thus to exert himself; according to one eye-witness, he "created amazement by his ubiquity." He is over seventy years old.

A WHOLESOME FAMILY.—There is now living in the northwest part of the town of New Haven, a venerable, but hale and hearty couple who have been blest far above the common lot of mortals. Mr. Ira Ward and Mrs. Ward have raised a family of three sons and seven daughters, the youngest of whom is over 26 years of age. All are married and in good circumstances, and are persons of the most temperate habits. There are seventeen grand-children and two great-grand-children. What is most remarkable is the fact, that through all these years, there has been but one death—that of a child—throughout the entire family circle, extending from Vermont to Missouri. Hale and hearty on the old homestead yet live the progenitors of this large family. Mrs. Ward still "does her own work" about the house, with not a little of the activity and tidiness which characterized her more early years, when all the "boys and girls" who are now so far away, were at home and "made the house so noisy there was no living with them." They have been spared to see the utmost wish of their hearts realized in their children, and now blessed with competence, they are gently descending the down-hill of life, amid the respect and good wishes of their friends and neighbors, and the affection of their children.

Such instances of wholesome families are rare, but exceedingly beautiful. They show the possibilities of human nature under favorable circumstances. With proper attention to the laws of health, longevity, as well as genius, is hereditary.

DOES IT PAY TO BE SICK?—The Medical and Surgical Reporter estimates the cost, to the people of the United States, of medical services and medicines, at \$100,000,000, and adds \$25,000,000 for the quack medicines swallowed "Let the people," it says, "study these figures awhile, and then reflect that probably one-half, or certainly a large fraction, of this expense, is incurred by a deliberate infraction of the laws of health; that, if they tipped less, smoked less, overworked less, were less 'fast' and less self-indulgent, they would save some thirty or forty millions a year."

If the cost of the loss of time, loss of happiness, loss of ability to do and dare was added to the above, there would be no counting the expense of sickness. And then add to this the expense of those indulgences that make us sick! What slate would hold the figures! The truth is, sickness is the most expensive nuisance on the face of the globe. There may be instances where it makes people better, but generally it makes people selfish, sad, misanthropic, nervous, mean, and miserable. The best way to make ourselves happy and good is to keep ourselves well. Then we are apt to be sweet and kind and wholesome. Moral reform societies and tract societies might learn a lesson from this fact, and do more good with less money than they are now doing.

MINISTERS' SALARIES.—It is reported that the salary of Henry Ward Beecher is \$20,000 a year. None too much, we say, for the work he does. If ministers were better paid they might do better work, and the profession attract a better class of minds. Moral power, like intellectual, ought to receive its reward. The idea that money honestly earned would corrupt the profession is too false to be thought of. Ministers with good salaries will be healthier and happier, and preach a purer, sweeter religion than they can while their temporal wants are not half supplied. Pinch the clergy and you curtail their power, for money represents power. The meager pay that ministers get has no doubt kept thousands of talented

men from the profession. It is true that many ministers do not earn much. It is not every man who has a right to preach, but such as have should be paid more than those of any other profession, because their labor is of a higher order, requiring a higher order of talent to perform it.

COLLEGE DORMITORIES AS AFFECTING THE HEALTH AND MORALS OF THE STUDENTS.

—The Cornell Era informs us that dormitories are becoming less popular than formerly, and will in time cease to be a requisite of a college. It says: "It has long been a question with college authorities whether it is best to feed and lodge their students. Thus far in their history American colleges have tried, and the majority at the present day practise and uphold the dormitory system. But, if we judge correctly, there is a growing sentiment in favor of abolishing dormitories and college boarding-houses, and of quartering students among the private families of the town where an institution is located. This opinion should be fostered, for it is calculated to promote the true interests of the student. Where hundreds of young men are living together in close quarters, separated in a great measure from the restraining and refining influences of the family circle, invariably their manners suffer. The tendency is more or less to develop clownishness and rudeness. We do not say that all become boorish and rough, but there is danger of it. It is argued by the advocates of the dormitory system that its temptations are more than offset by its advantages; among which are the independence and responsibility resulting from the isolation of the student, the public sentiment created by the college world to keep him within proper bounds, and the equality of footing on which all are placed. They claim, too, that the distribution of students through the community is attended by far greater extremes of vice than can occur within the precincts of the dormitory. In regard to the self-respect arising from the occupation of a separate room, we fail to see why it is not as great in the case of him who

resides among the members of actual society, as in his who lives in a society more or less artificial and conventional, such as inevitably springs up where elements are found so discordant and heterogeneous in character as those in ordinary dormitories. As to the public sentiment, it seems to be a well-substantiated fact that the average tone of a moral community is apt to be higher than that of a large number of youths of similar passions gathered under one roof. The equality which is claimed is, so far as our observation has gone, a feeble argument; cliques are as likely to be formed in dormitories as outside. It may be conceded, however, that the extremes of misconduct are greater outside than under the supervision of proper officers; but this is more than compensated for by the general average of behavior and morals which is secured by mingling with the world and giving the character a natural development—one which will fit the possessor for the actual things of life. Far better will it be for education when the energies of our fast increasing number of colleges shall be concentrated, and applied only to the most worthy purposes, and not frittered away for purposes which can be otherwise provided for."

For our part, we hope that the dormitory system will cease to exist. Dormitories have outlived their highest usefulness in most places, and the sooner discontinued the better. College students, like all others, need good homes to live in while studying, and these can never be furnished in the dormitory.

MIXING WITH STRANGERS.—The effect of mixing with new people, who have new ideas and new methods of thought, is very salutary. Always to see the same people, do the same things, feel the same way, produces a stagnant condition of the mind and heart that is very distressing to behold. There are thousands of invalids who might be greatly benefited by getting away from home, if only for a short time, to mix with strangers, and be touched with the magnetism of the great world as it courses in its accustomed rounds. And there are mental and

moral invalids who need the same change to get their minds and hearts enlarged and let in a little more of the great light of life. Outside influences are very valuable to those who at home have been well trained by healthful influences in early youth, so that they can avoid the snares and pitfalls into which those who go blindly often fall.

DOES SICKNESS AND SUFFERING MAKE PEOPLE BETTER?—Regarding this Mr. Beecher says: "Suffering is not the element that conquers the world. Joy has been the great power in the world, and will be to the end. Suffering is the undertone; but the melody is carried far up, and that is joy. Christ was a healthy man. He did not do or experience what would be called unmanly in another. That he foresaw the future there is no doubt; but we are not at liberty to say that he habitually foresaw. He came from the temptation of the wilderness victorious, and soon thereafter he was found at Cana at a wedding, of which the festivity probably lasted fifteen days, and there is no hint that he did not take part in the rejoicing like the rest. He went to the synagogue as we go to church; he was called to teach as a leading man, and he so impressed the crowds everywhere that they crowded around him as a victor. A man who is habitually sad does not attract little children, and yet they ran after Jesus. All the signs tell that he was a sweet-blooded man. I believe that he had the serenest, sweetest heart, the deepest nature, that he was the most loving, joy-producing being that the eye of man ever rested on. Suffering did not limit, or canker, or palsy him; it was accepted by him. It is enough to witness the sight of the most joyous being in heaven, willing to suffer, that all the poor, the needy, the suffering, may henceforth have companionship and sympathy.

HERBERT SPENCER.—It is said that the health of that philosophic writer, Herbert Spencer, whose works have been much read in this

country, and whose essay on physical education has produced so much of an impression on the large class of teachers in this country, is himself suffering from too close application to study and writing. He is said to be in indigent circumstances. Americans ought to make up a purse of five thousand dollars or more and present it to this worthy man, for his services in the cause of education alone.

NO COLDS ON MOUNT WASHINGTON.—Mr. Nelson, one of the party who is spending the winter on Mount Washington, reports that there is no suffering from colds there, yet the thermometer has often varied one hundred and twenty-one degrees in two days, and often stands below zero. The parties go, bareheaded from a hot room, and without gloves or overcoats, out of doors, where the thermometer is ten degrees below zero, yet do not catch cold. The wind often blows at the rate of nearly one hundred miles an hour, and active exercise out of doors is very fatiguing. Digestion is rapid, and abundant food is necessary.

DEATHS FROM SNAKE-POISONING IN INDIA.—Dr. Fayer has obtained returns from a number of districts in India relative to the frequency of death from snake-bites in that country. The result is truly appalling. It appears that the mortality from this cause over parts of India equal to about half the area of Hindoostan amounts annually to 11,416 cases, made up of 6,645 in Bengal, 1,995 in northwest provinces, 755 in the Punjab, 1,205 in Oude, 606 in the central provinces, 90 in Central India, and 120 in British Burmah. Dr. Fayer estimates the entire mortality from snake-poisoning in Hindoostan as 20,000 annually. In order of destructiveness the cobra takes the first place, and the krait, or *Bungarus coaruleus*, the second.—*Medical Times.*

What has become of all the famous India snake charmers, of which we have heard so much?

How to Treat the Sick.

TREATMENT OF SCARLET FEVER.—I noticed an article on the contagiousness of scarlet fever, and also the means to prevent its being carried to other persons, etc., all of which I think very advisable. But I propose to briefly give from my own experience a statement of the most successful treatment of the disease, when contracted, for, in spite of all prophylactics and the utmost care, the disease is slaying its tens of thousands every year throughout the world. About the year 1849, the disease prevailed as an epidemic in northeastern part of Ohio, and was very fatal. I was then practising, or attempting to treat it. I was losing one-half of my cases (and, by the way, I was as successful as any of my medical brethren), and my heart sickened at the thought of so terrible a mortality, and so little success. I was using all the regular, as well as other common sense means, with the result above stated. The year previous, I had seen in a medical paper that a certain Dr. Morril of South Carolina had been very successful in treating scarlatina by bathing the throat and neck with hog's lard. The thought occurred to me that if it was successful thus far, why not bathe the whole surface of the body, as the inference was that the fever spent itself upon the lard, instead of the fat of the system, by a process of inunction. I think the hog was made for some useful purpose, and as I do not favor eating it, believing it to produce a full, gross habit of a positive character, predisposing to disease, I was glad to get a chance to test its use, not merely to the throat and neck, but to the whole surface. I was attending a family of three children, two of them boys, nine and eleven years, and one girl seven years old. The two boys were quite sick; one had been sick four or five days, and the other, two or three days. The disease seemed as unyielding as any I had found up to that time. I told the parents, should the daughter take it (she was then well, but they were very solicit-

ous about her, because she was an only daughter), I wanted them to melt a sufficient quantity of hog's lard, and bathe her from head to foot with it every four hours, until I could see her. After each bathing, to wrap a linen sheet loosely about her, in bed, or let her lay between linen sheets, and give her nothing but cold water to drink. She was a fine, fat, hearty-looking child of moderately full habit, one in which the disease, I have no doubt, would have been very violent. On my next visit, the following evening, I found Mary sick, having had a very violent attack of vomiting about 7 o'clock that morning (by the way, an attack with vomiting was considered the very worst form), and the treatment I ordered had been followed to the letter. When I saw her she seemed quite comfortable. Her mother stated that, almost as soon as she had finished applying the lard, she ceased vomiting and went to sleep, continuing to sleep during the day, and occasionally calling for drink. I ordered a continuation of the same treatment till my next visit. The following day, to my great satisfaction, Mary was, or seemed to be convalescing. She got well in six or nine days, while her brothers lingered for weeks, and one of them never recovered.

Since the occurrences mentioned above I have repeatedly tried the lard, and almost always with success, if called in time. I regard the treatment as most favorable, for, in nine cases out of ten, it will arrest the disease by enabling nature to throw off the virus or poison causing the malady. I would advise a gargle of salt water, and perhaps some other things that the condition of the patient may require. I think I may say without exaggeration, that I have successfully treated thousands by the above mode almost exclusively. The precise action of the lard on the system, I do not claim to be competent to determine. The fact was exemplified to my great satisfaction, and, to me, it has disarmed the disease of a great part of its terror, for to

know how to counteract or treat any disease so that the per cent. of loss is average, is to destroy it, in a great measure.

I have thus given what I believe to be facts, and have, from year to year, as the disease made its appearance treated it with more than average success, when compared with other infantile diseases. I herewith intrust the statement to your disposal, Mr. Editor of *THE HERALD OF HEALTH*, if you deem it worthy of publication in your valuable journal.—*James M. Hole, M. D.*

A CURE FOR EVERY DRUNKARD.—

1. Rise in the morning of each day at a given time.

2. Dress warmly, especially the feet, legs, hands, and arms.

3. Walk as far as you can with ease, and this briskly.

4. Eat breakfast at 8 o'clock and make your meal heartier than at dinner.

5. Regularly every day take a bath, at a temperature of 85 degrees in a warm room, the best time to take it is about 11 A. M.

6 After it walk one-fourth to one-half mile and go to bed, and lie from one to two hours.

7. Between rising and dinner take a ride in a wagon.

8. 3 P. M., dine. Eat farinaceous and fruit foods largely, and less meat than at breakfast. Drink nothing at dinner. From 4 to 6, walk briskly as far as you can with ease.

9. During the evening play games, sing, dance, and do things that amuse.

10. At 9 P. M., summer or winter, go to bed.

Also.

(a) Break up all old associations.

(b) Keep away from old resorts.

(c) Quit chewing and smoking tobacco, for this, blunts the *moral* sense—and makes the imagination dull. Liquor makes the ideal faculty wild and unsettled, while tobacco makes it obtuse.

(d) Never forget that if you are to be a new man you must have new *ideas*, and these must be such as to make you discard the use of alcohol

in all its forms. Do not take it as a medicine any more than as a beverage, for it will reawaken the old desire in the one case as readily as in the other.

(e) If you know enough about the needs of human nature to *pray*, I advise you to do so, asking help from God. Prayer is not against, but in accordance with natural laws, and to get strength of will, and clearness of judgment, with thoroughness of purpose infused into you through spiritual influence is not only possible but sure, if you ask aright. "Ask and you shall find, knock and it shall be opened unto you." Place yourself under Divine guidance and you will get help.—*Dr. J. C. Jackson.*

CURE OF ERYSIPELAS.—The treatment of this disease hygienically, should be governed by the degree of intensity indicated by the symptoms. To allay the heat, redness, and swelling of the inflamed part, it must be kept well covered with tepid, cool or cold wet-compresses, often changed and re-wet; or as some prefer, the parts may be covered with a cranberry or tomato poultice, renewed every one, two, or three hours, as seems requisite; the fever and heat of body must be controlled by the wet-sheet pack, sitz or sponge bath. The abdominal wet-girdle in connection with the two latter sometimes will be found sufficient. The bowels must be kept open by warm water enemas, the thirst allayed by the imbibing of pure cool water, the temperature properly regulated and plenty of pure fresh air supplied by proper ventilation. These means, accompanied with good nursing, quiet, cheerfulness, and abundance of patience on the part of the attendants will prove successful in curing the great majority of cases.—*Dr. J. C. Whitaker.*

We have known this disease to be broken up in its first stages by a single Turkish bath.—*Ed. H. or H.*

WHY is a madman like two men?—
He is one beside himself.

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

How to Prevent Spring Sickness.

There are a great many people who are subject to a "bilious attack" every spring, and who expect it as a matter of course. Now there is no more need for people being thus sick in the spring, than at any other time of the year, if they only know how to live. This periodical sickness can be prevented simply by regulating the diet. Not that all persons who have been subject to such attacks year after year, for a long time, can always overcome the difficulty at once. We are all such creatures of habit, that when any thing becomes established in this way, there is a strong tendency to its return at the regular time, even after the producing cause has ceased to operate; consequently in bad cases it sometimes takes several years to overcome it entirely. Under a proper regimen the attacks will grow less severe every year, until they entirely disappear.

During cold weather people eat larger quantities than usual of carbonaceous food, such as fat meats, sugar, butter, bread, cakes and other preparations of white or superfine flour, nuts, fats, syrup, etc. Of course, a much larger quantity of carbonaceous food is required by the system in cold weather than in warm, but as a general thing people eat too much of it, clog up their systems with the excess and overburden the excretory organs, particularly the liver, in vain efforts to get rid of it. Those who take a great deal of out-door exercise are usually enabled to work it off, and seldom suffer much in consequence, except in hot weather; while those who lead a sedentary in-door life suffer most. When warm weather comes on in the spring, people require much less carbonaceous food, but instead of changing their diet as the weather changes they continue to eat the same kinds of food they have been eating during the coldest weather of the winter, and the consequence is that the already overburdened liver is unable to bear up under this extra load, and utterly refuses to perform its function until it has had a chance to rest and to throw off its accumulated burdens. Now, to prevent this state of

things two things are necessary. First, people must eat a less proportion of carbonaceous food at all times. Second, as the weather grows warmer in the spring they must eat a much less quantity of it than they do in cold weather, and substitute instead more vegetables and acid fruits. Every family should have a large supply of canned fruits and green vegetables to use at this time of year. For a single article there is nothing so good as tart apples, and they should be used in unlimited quantities.

Lead Water-Pipes.—"Will you be good enough to inform me through the medium of your journal, whether the water drawn from the hot-water pipes in dwelling-houses contains any thing poisonous, either from the lead pipe or the copper boiler, and whether any harm to the system would attend the use of it when used as enemas in cases of constipation? I ask this question because many persons have not the facilities for heating cold water."

Water that stands in, or passes through lead pipes is rendered more or less poisonous according to the length of time it remains in contact with the lead and the quality of the water. The softer the water the greater will be its action upon the lead. The injury which would result from its use for enemas would be very slight, as but a small quantity would be absorbed, still it is better to use water which is not open to this objection if it can be obtained. An invention is greatly needed which shall supply a material for the conveyance of water upon which neither water nor any of the substances usually contained in it shall have any effect. The best thing, as yet, appears to be tin-lined lead pipe.

Eating Fruit in the Evening.—"I am troubled with dyspepsia, and would like to ask if you think the practice of eating apples in the evening, an hour or so before retiring is hurtful—breakfast and dinner being the only meals?"

I think the practice of eating ANY THING but an hour or two before retiring is hurtful.

especially for a dyspeptic. Of course it is not nearly as bad when no supper is eaten as when the three regular meals have been taken. For most persons fruit is less objectionable at night than the kinds of food usually eaten. If you eat three meals a day, take the third meal earlier in the evening, whether it be composed of fruit or not. Fruit should not be eaten between meals, but be made a part of the regular meal, and then the larger the proportion of fruit the better.

How to Give Children an Appetite.—A noted itinerant M. D. health lecturer, in a lecture recently delivered in this city, gave the following advice for the treatment of children who do not have a good appetite, but who simply nibble at a little of this thing and a little of that, and do not relish any thing unless it be some extra nice titbit. His advice to the parents of such children was to put upon their plates at each meal a quantity of food sufficient for the needs of strong, healthy children, and *make them eat it*. No advice could be worse than this. Children should never be forced to eat, but should be placed in such relations to life that they would always have a good appetite when the regular meal-time came, and relish plain, healthful food. Give children an abundance of out-door exercise, fun and frolic, make them regular in their habits, and feed them only upon plain, nourishing food, and they will never need complain of their lack of appetite; but keep them in school five or six hours a day and, confined to the house the rest of the time, frowning down every attempt at play, feed them upon rich food, fine-flour bread, hot biscuits, pies, puddings, cakes, etc., let them eat candies, nuts, fruits, and any thing else they can get hold of at any and all hours between meals, give them tea and coffee to drink, and you need not expect they will have an appetite, but you may expect they will be pale, weak, and sickly, and if you follow the prescription of the above mentioned traveling M. D., and force food down their throats without changing their conditions of life, you need not wonder if they leave you to mourn their early death. To cram children with food when their appetite does not crave it, is simply murder, slow, but no less sure, and how a man claiming to impart health instruction to the people can recommend such a thing is past my comprehension. The

true way is to so change the conditions of life as to create a demand for food, then force will not be required to make the child eat.

Sleeplessness and Indigestion.—“How should sleeplessness in a very young babe be treated? also what will cure indigestion and acidity of stomach?”

Cure the indigestion, and the sleeplessness will disappear. To do this feed the baby less frequently, and do not allow it to take any thing whatever into its stomach except milk, and that only at certain stated times, not less than three hours apart. If the acidity does not soon disappear, extend the time to four hours. Be sure and be regular in the times of feeding. It is very important.

Tropical Fruits.—“Do you recommend the use of tropical fruits by dyspeptics—lemons, oranges, and bananas in particular?”

In this climate the fruits of the temperate zone are generally preferable to those of the tropics. The tropical fruits which we get here are picked before they are ripe, and lose much of their freshness before we get them. The riper and fresher fruit of any kind is the better. If we were in the tropics and could get its fruit ripe and fresh from the tree, it would be better than any of our fruit here, if it had to be shipped there to be eaten.

Vinegar.—“I thought you condemned the use of vinegar, and did not use it in your Institution, consequently, I was much surprised to see in the March number, a recipe for making lemon pies in which vinegar was mentioned as one of the ingredients. How is it?”

We do condemn the use of vinegar, and do not use it in our Institution. Its appearance in the recipe, was owing to a mistake of the printer. The word vinegar should have read sugar. In my opinion, vinegar is more injurious than an equal quantity of pure, unadulterated whisky.

The Turkish Bath for Lunatic Asylums.—The Lunatic Asylum at Cork, Ireland, with accommodations for five hundred patients, has the Turkish Bath. Since its introduction the cures have been 40 per cent. while before they were only 20 per cent. Why will not the asylums in this country introduce them, and cure twice the number of patients they now do?

NOTICES OF NEW PUBLICATIONS.

INSANITY IN WOMEN. The Causation, Course, and Treatment of Reflex Insanity in Women. By Horatio R. Storer, M. D., LL. B. Boston: Lee & Shepard.

A book written with perhaps a pardonable conceit, but with the evident earnestness of conviction. Should it be eventually decided by the Faculty that the premises here laid down are just and rational, a corresponding mode of treatment will unquestionably follow; but till such time we believe the statements and suggestions are calculated to awaken suspicion, if not bring odium upon institutions of great and incalculable benefit to the public. In thus throwing data to the unscientific mind it is, as it were, a betrayal of the sanctity involved in the relation of Patient and Physician. Assume such ground and follow accordant treatment, and abuse will creep in, public faith will be unsettled, and a long retinue of evils succeed.

We do not apprehend the ideas are at all new to the experienced practitioner, but he very wisely keeps such knowledge somewhat in the background, and by no means converts it into a vortex, swallowing up all other ideas of cause of disease, or modes of treatment. The statistics are not sufficiently broad to be as yet satisfactory, but the indications are certainly in favor of the theory. Such being the case, the question at once resolves itself into one of a great moral import. If insanity in woman be in the majority of cases caused by some disturbance of the reproductive organs, it is quite as much a theme for the moralist as for the medical man. We do not accede the point that this is the case with one sex more than with the other; if men seem to be more immediately made insane by intellectual pursuits, by lack of the like stimulus, by domestic infelicity, or commercial misfortunes, the same causes that are supposed by Dr. Storer to be nearly universal in producing mental alienation in women, may lie undiscovered in the background in men. The brain may yield only a sympathetic indication in the one case as in the other.

It is true, in the woman the process of reproduction is protracted, complicated, and of a more disturbing tendency, yet we believe that all the processes of nature are so handsome, wholesome, and so made up of delights and compensations, that to a womanly mind, a healthful organization, and sound spiritual instincts, these disturbing causes are not only neutralised, but converted into a source of enlightened happiness. It is the perversion of what is just and beautiful in human organisation that leads to sorrow, insanity, and death, not the natural exercise thereof. To a healthful woman maternity is a natural and wholesome instinct. She should marry, expecting child-bearing to follow, just as much as her love lends dignity and purity to the marital relation. If she is unprepared for this result, let her not marry. There is a terrible significance in the somewhat coarse saying of Sterne, in speaking of a woman past the prime of life, who had entered the marriage relation. He said, "How a woman past child-bearing can ask the blessing of God upon her concupiscence is past my comprehension."

"Guard thy heart with all diligence, for out of it are the issues of life." We are not altogether of the earth, earthy. If men and women were no better than the

beasts that perish, the abuse of what should be holy in our organisation would not be followed by that terrible scourge, insanity. Bestial lives would be succeeded by bestial death, not by a foretaste of spiritual death in the eclipse of the mental faculties. "Know ye not that your bodies are the temples for the Holy Ghost to dwell in?" and who shall dare profane this holy temple, by unhalloved practices, by "strange fire" upon its altar, by ill-regulated passions, inordinate desires, and sensual evasions of its predestined laws? If insanity be on the increase, so are the vices, which our Author asserts to be the cause. It is the utter, entire reform in Press, Pulpit, and Social Life, that is now demanded, more than Asylums, Hospitals, and Prisons.

Look in the advertisements of our papers, look at the "personals," look at the police reports, and no other testimony is needed to prove the truth of the wide-spread and open immorality pervading all classes. "What is the worst person in the world?" asked the great moralist, Johnson.

"I suppose a person without conscience," some one replied.

"Or without shame, which I suppose means the same thing," answered Sir Joshua Reynolds, the plausible surgeon.

"How can you say that?" asked Johnson, "when conscience refers to God, and shame only to man?"

It would seem that conscience and shame also are fast going by the board, if one may judge of what one sees and hears.

There can be no doubt that many cases of insanity may be traced to the unnatural lives which many married women live, whose repugnance to maternity becomes in itself almost an insanity. Such women should not marry at all. There is an indecency in the steps they take to avoid a natural consequence of the marriage relation, which in itself involves paternity and maternity. Let men and women form co-partnerships for business and social intercourse, if they will, but do not substitute marriage for this. Children keep the world always young, and the mother of children is a nobler, sweeter, more gracious and appropriate representative of a true womanhood, and younger looking also, than the cadaverous, mawkish, discontented woman, who becomes prematurely wrinkled and old, by her state of conjugality unreflected by the graces of maternity. Madame Bonaparte, the Mother of Wesley, Elizabeth Fry, Mary Washington, and others that might be named, with their dozen or more of children, were wise and beautiful representatives of the sex. Their clear heads, and wholesome bodies were in no danger of insanity. Men and women who obey the laws of life are rarely troubled with abnormal states of the mind, but while our literature is of the exciting kind that now prevails, and all the vices of vanity, and ostentation incite our youth to extravagance and crime, it is hopeless to expect that our hospitals, asylums, and prisons will be free of their victims.

The cases cited by our author are melancholy in the extreme, and show conclusively that the brain may be apparently healthy, and yet give utterance to the most appalling language—the images, and the language of the

feul spirits that wait upon impure passions, and misdirected impulses.

There is no reason why a medical writer should not be clear and luminous in style. If writing for the initiated much technicality may be observed, but in proportion as this prevails the work is spoiled for the common reader; but there is no excuse for cumbersome phraseology, and bungling, inverted paragraphs, of which a tyro in literature would scarcely be guilty, as in the work before us.

I CAN'T. I CAN'T. I'LL TRY. New York: Leavitt, and Allen Brothers. Illustrated.

A series of stories illustrative of the faults, trials, difficulties, and triumphs of a Christian, cultivated household. There is sufficient contrast of character to afford a lively interest, from the staid, discreet Daisy to the dashing Nelly—the pious Arthur to the adventurous Charles; and the petted Lucy comes in for a share, as indicating that the most loving character can become detestable by suspicion and distrust, and that the warmest affections of the heart, unless regulated by the principles of justice to others, and self-sacrifice in ourselves, become inverted, and a fountain of gall and bitterness. Daisy's wise "never mind" to Lucy is very apposite, and her modest "I'll try," full of pith and moment. The series are well adapted to Sabbath-school, as well as home reading.

How Could He Escape? A Temperance Tale.

By Mrs. Julia McNair Wright. Published by The National Temperance Society, 173 William Street, New York.

This is an exceedingly well-written story, with pregnant thought and wholesome ideas, designed to advance the cause of Temperance. The character of Mary Dev-

enport, the woman of sound morals and lack of religion, or spiritual ideas rather, stands forth like a piece of rude, handsome sculpture. Perhaps we should not sympathize with the author's views in this relation, but it was needful to the catastrophe of the story, that an author thus mentally constituted should make her own standpoint, and draw her own inferences; though we much doubt if a young man, subjected to the wholesome training of Gay Devenport, would so lamentably fall, unless he had from some cause inherited the poisonous appetite, and its concomitant insane frugate. The work is interesting and vivid, if not philosophic.

LIFE, AND ALONE. Boston: Lee & Shepard.

A weird, disjointed, disagreeable, improbable story, the staple of which is school-day life, and Italian perfidy and vindictiveness. The scene is laid partly in Italy, mostly in England. Its most prominent and most revolting feature is, that in the process of family troubles and concealments, a brother and sister become entangled in a warm attachment for each other, and but for timely disclosures would have perpetrated an incestuous marriage.

The public mind has been made too familiar by certain publications with these horrible ideas, and however glossed over by invented circumstance in a work of fiction, and however concealed by fine-spun sentiment, they are no legitimate subject for literary art. No publisher is justified who throws such poison before the public mind, corrupting as it is to the sources of thought, and casting suspicion upon the holiest sentiments of the human soul. That such enormities have existed is no excuse for familiarizing them to the brain; rather are they to be met with that silence which best expresses human execration.

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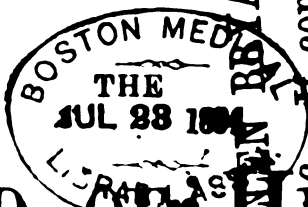
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CONTENTS FOR MAY, 1871.



GENERAL ARTICLES :

	Page
Intemperance and National Integrity— <i>Aaron M. Poveell</i>	193
Toning the Mind— <i>Rev. John Monteith</i>	197
The Education of Our Daughters— <i>Mrs.</i> <i>R. B. Gleason, M. D.</i>	201
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Birdsall</i>	205
At the Cross (A Poem)— <i>Elizabeth Oakes</i> <i>Smith</i>	208
Railway Traveling— <i>Rev. Charles H.</i> <i>Brigham</i>	210
The Neglected Rich— <i>F. B. Perkins</i>	215
Let Her Speak (A Poem)— <i>Mrs. M. A.</i> <i>Alder</i>	216
Generative Expenditure and Longevity — <i>E. Bay Lankester, B. A.</i>	217
Studies in Hygiene—How to Enhance Personal Beauty, etc.....	220
Recipes for Wholesome Cooking—Soups and Salads.....	224

EDITORIAL DEPARTMENT :

An Interesting Letter from William Cullen Bryant.....	225
Objection to Women Doctors.....	226
Laws of Fermentation—Hebrew Cus- toms—Rabbi Isaacs—Lectures.....	227
A Hindoo at an English Dinner Table —Climates for Invalids.....	228
Bones Influenced by Food—Is it Air, or Something Else?—Preserved Meat..	229

HOW TO TREAT THE SICK :

Cold Water Treatment of Typhoid Fever	232
---------------------------------------	-----

ANSWERS TO CORRESPONDENTS :

Chills and Fever—Flatulence, its Cause and Cure.....	232
Cause of Poor Teeth—Lemons and Bil- iousness—Cure for In-growing Toe- Nails—Climates, Spirometers, etc....	233

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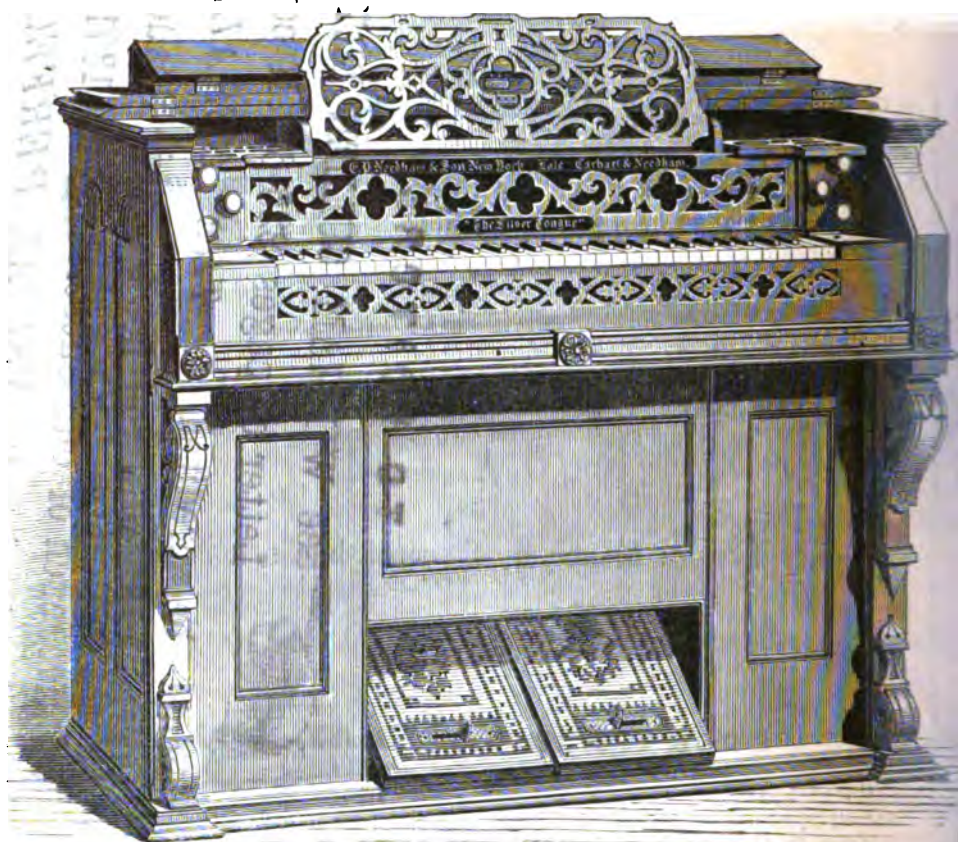
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THE HERALD OF HEALTH

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JOURNAL OF PHYSICAL CULTURE.

Vol. 17, No. 5.]

NEW YORK, MAY, 1871.

[NEW SERIES.]

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A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

COMPRISED IN A SERIES OF TWELVE ESSAYS CONTRIBUTED BY OUR BEST THINKERS AND WRITERS.

No. VII.—INTEMPERANCE AND NATIONAL INTEGRITY.

BY AARON M. POWELL.

SOBRIETY and intelligence, on the part of its citizens, are indispensable to a prosperous, enduring nationality. In this country, we are still experimenting with, and approximating to, Republicanism. Our success is by no means fully assured. A chief source of our national weakness is Intemperance. Our political history furnishes only too many painful illustrations of its deplorable effects in the deterioration of individual and official character. How has intemperance impaired the usefulness of many of our public men! We need but remember the names of Silas Wright and Daniel Webster as instances of such deterioration and bankruptcy. Familiarity with vice deadens our sensibility to its destructive consequences. When a President is assassinated the whole nation shudders with horror. But Senators, Representatives, and others intrusted with grave public responsibilities, under the slower poison of the intoxicating cup, one after another surrender, are eclipsed in political oblivion, and go down to death in dishonor, and the mournful tragedy, often as it is repeated, excites but a

passing comment. Very recently an Illinois Senator, a man of fine talents and generous sympathies, has left the United States Senate, sadly blighted by strong drink. The Congressional Temperance Society was not inaugurated one hour too soon. Great indeed was, and continues to be, the need thereof. In the old-time courts of kings and queens, drunkenness was bad enough. It is more mischievous still in a Democratic-Republican Congress. Deputed as the guardians of important trusts, involving the rights and interests of millions of constituents, how disastrously are these trusts frequently betrayed by Senators and Representatives who are "muddled," reckless, or stupefied, from the use of intoxicating drinks! Little better than insanity, much of the time, is the mental condition of men who abandon themselves to the use of strong drink and to the habit of intoxication. How utterly unfitted are they, in the absence of self-control, for the duties of legislation, involving the present and future welfare of this and succeeding generations! What American does not yet blush with shame at the

memory of our late "accidental" President on his "swinging circle" tour of shameless debauchery, and in his periods of frenzy and intoxication at the capital as well! Little less than miraculous was our national deliverance from the peculiar perils of an administration which had for its head a man so notoriously drunken and profligate.

But it is not alone or chiefly from intemperance within the ranks of public, representative men that our greatest national danger lies. It is rather from intemperance among the voters and masses of citizens that we have most to fear. Citizenship in a republic, with its rare opportunities and corresponding responsibilities, calls for a high order of character, for a noble type of manhood and womanhood. The voter is the principal; the legislator the agent. If the agent be drunken and incompetent he may be dismissed and his place filled by a better. But the voter of a republic is himself a sovereign. Intemperance, with its consequent incompetency among the voters of a nation, is therefore attended with the gravest peril. Republicanism in all our large cities is to-day a confessed failure. The birthright of citizenship is bartered for strong drink. The grogshops rule. Elections have become a farce. Voters go through the motions but to follow a prior edict of the grogshop. The preliminary canvass indicates the probable number of votes which will be necessary, and from the pliant material which intemperance furnishes "repeaters" are manufactured. However enthusiastic the rural districts, the grogshops of the metropolis can manufacture or manipulate votes equal to the emergency, and neutralize their heaviest majorities. The small number of twenty-seven thousand votes, if rightly distributed in certain States, it has been computed, would have changed the result of the last Presidential election, making Seymour instead of Grant the President. If the need could have been anticipated in advance, the grogshops of New York alone could easily have proved themselves equal to the emergency. Nor will their ambition for political conquest long be satisfied with municipal and State affairs—nothing short of acknowledged national supremacy. The rum interest cares nothing for the purity of the ballot-box.

The formation of powerful "rings" and monopolies is a growing and evil tendency of the present period. Of these one of the most vicious, powerful, and threatening is the immense commercial interest represented in the liquor traffic. In New York City alone two hundred million dollars are thus invested! As we write,

ten million dollars, we are assured, are represented in the lobbies of the Massachusetts Legislature in behalf of the beer manufacturers only! What an overwhelming pecuniary strength is therefore represented by the thousands of millions invested in all the various kinds of intoxicating liquors throughout the country! By it both the great political parties are subordinated, society is demoralized, crime is stimulated, and in its presence superficial, popular religion is dumb.

Inevitably the cause of Temperance is intimately related to and involved in politics. Politicians for the most part are shy of it, and many Temperance men are prone to avoid and postpone the issue, in their political relations. It is the proper function of government to so regulate affairs, wherever it assumes to interfere at all, as to promote the general welfare. In view of the consequences of the liquor traffic it would be clearly at fault if it declined all interference. It does not, however, decline to interfere. It has long taken cognizance of the manufacture and importation of intoxicating liquors, in connection with the public revenue. It exacts license of dealers and puts certain restrictions upon the traffic. If therefore the Government may interfere for any regulation of the liquor traffic, it may and should so interfere as best to promote the public good. It is an established principle of the Temperance movement that total abstinence from all intoxicating drinks as a beverage is physiologically the wisest, and morally the safest rule of individual conduct. Society is but an aggregation of individuals. If total abstinence is right for the individual, the duty of the State, if it interfere at all, is reinforcement. License is, however, the present practice of the Government. That it does not promote the public welfare need not here be argued. That it is a prolific source of public demoralization, instead of promoting the general welfare, no intelligent, thoughtful man or woman will deny. License is the policy advocated, or acquiesced in, by both the two great political parties. All citizens who are in the ranks of either of those political divisions are responsible for the perpetuation of legalized intemperance. The ballot is the representative of the power of citizenship. It is the means which the voter employs to determine, so far as he individually can, the policy and character of the organized government of which he is a constituent part. It is a rare opportunity; it is attended with a corresponding responsibility. How is this opportunity used, this responsibility met, by the Temperance men who are voters?

We scarcely need to remind our readers that, in its political aspects, the Temperance cause at the present time is in a discouraged, languishing condition. Prohibition, where it has been attempted, has lacked an adequate public opinion to insure thorough, efficient execution. "Local option" is a partial expedient from which, of course, in its very nature, only partial, and to radical Temperance men and women, unsatisfactory results could be realized or expected. As both a State and national policy, the license system generally prevails. Revenue is exacted of manufacturers and dealers. In return the Government pledges to them immunity from interference, and the Temperance movement is defied, and the community demoralized. In the support of this legalized intemperance, both of the great parties are involved. While Temperance men, therefore, continue to vote down their own avowed principles, it is not at all surprising that they should be at a political disadvantage and under a cloud. Thousands of members of the different Temperance organizations, while advocating total abstinence in the meeting or lodge, at the polls, where, most of all, their action is fraught with direct good or evil results to the cause, vote to perpetuate drunkenness and all the crimes and casualties which attend it. They attempt to build up a protective Temperance wall of virtue with one hand, while at the polls they continue to overthrow it with the other. Launched upon a flood-tide of intemperance, with one oar they pull up stream; with the other, down! If, under such circumstances, there is progress in either direction, it is, of course, backward, rather than forward. Though the pledge, the speech, the sermon, the prayer are for Temperance, they are nullified by the vote, which endorses the license platform, which sends to the legislature members to perpetuate, and chooses officers to execute, the license law. Herein is the fatal weakness of the Temperance movement. It is the want of intelligent, conscientious discrimination at this point which hinders its progress, and lessens the value of the service rendered in its behalf by many of its well-meaning friends. The avowed enemies of the cause are powerful, and unscrupulous; but in the political aspect, the unconscious enemies of its own household are among those by whom it is damaged most seriously. While the votes of Temperance men are given to perpetuate legalized intemperance, little relatively can be done toward reconstructing the State upon the only safe and true principle of prohibition and of total abstinence from all intoxicating drinks.

What then are the political duties of Temperance men and women? We include women in our inquiry, for, though now unjustly proscribed at the polls, they are not without political influence, to be wisely or unwisely exerted; and we confidently anticipate the period in the near future when their votes may, and we trust, in a large preponderance, will be given in behalf of prohibition. The hour is ripe for a forward Temperance movement. The general discussion has already consumed the life-time of one generation. In the light of that lesson of history which teaches that this is the average period required for the initiation and successful consummation of any great reform, is it not time now to begin to see some more definite and encouraging results than have hitherto been attained in the prosecution of the Temperance reform? The first political duty is to sever those relations which compromise and nullify one's principles. If the party is wedded to license and intemperance, and refuses to be divorced, the radical Temperance voter has no place left in its ranks in which he may properly stand. He must come out of it, that he be not a partaker of its iniquity. He must have the strength of character to stand alone, if need be, for a time. It is the first step which costs. It is no easy matter to step out of the ranks of the majority into what, at the outset, to superficial observers, is a forlorn, hopeless, useless minority. Down stream dead fish float easily; it takes live ones to go up. There exists to-day, latent, unemployed, or misdirected, a vast amount of political strength in the various Temperance organizations. Their membership is counted by thousands and hundreds of thousands. At present this reserve strength, which should be sacredly consecrated, in political, as in other relations, to the total abstinence, prohibitory policy, is, for the most part, subservient, in one or the other of the two great parties, to license and to legalized intemperance. We do not expect or affirm that a majority party in support of Prohibition can be on the instant summoned into being. But we do affirm, most earnestly, that the necessary preliminary steps can and should now be taken. The issue between the friends and opponents of Total Abstinence and Prohibition should be avowed, and uncompromisingly joined in the sphere of politics.

First, the *individual*; next, the *Prohibition League*; finally, a *Prohibitory Party*. The individual voter who signs the Total Abstinence Pledge should reflect that he violates the spirit of that pledge not less in voting for license leg-

isolation than if he were to put the intoxicating cup to his own, or direct it to his neighbor's lips. By the agency of his ballot he authorizes the sale of intoxicating drinks, and, with governmental sanction and protection, opens wide the door of temptation. His weaker brother enters therein and is sacrificed. Better not vote at all than to vote for the platform and candidates whose avowed policy is to perpetuate the evil we deplore.

We counsel the immediate and general organization among the friends of Temperance of *Prohibition Leagues*. Their members should be pledged not alone to total abstinence from all intoxicating liquors personally, but to an uncompromising support of *Prohibition* in politics, as against license, or an unrestricted liquor traffic. Where two or more agree, such a league is possible. Once formed, it becomes a nucleus about which additional political strength can be gathered. With such increase, the Leagues become the substantial basis of the party of *Prohibition*. If either of the existing parties will adopt prohibition in good faith as its principle, and choose candidates pledged unqualifiedly to its support, very well. The Temperance movement has asked this reasonable service of them, and hitherto they have declined. Let, therefore, *Prohibition Leagues* be organized now, and the members thereof concentrated into a new, distinct political force. The numbers may be small at first. But, as God is, and truth is on the side of Temperance, they will increase. In many localities there is already political strength enough, latent in the existing Temperance Societies, the Good Templars, the Sons of Temperance, and kindred organizations, if concentrated as we propose, and thrown as a unit for *Prohibition*, to hold the balance of political power. Thus concentrated and employed in real earnest, the Temperance movement has already a sufficiency of accumulated political capital to command an immediate respect in legislation, State and national, such as has never hitherto been accorded to it. The *Prohibition League* may begin this preliminary work of concentration at once, in every neighborhood, town, and city. The machinery for action at the polls may be called into existence as the election approaches. The time for discriminating action is at hand. Inebriate asylums are good to alleviate suffering, and to aid in curing the disease and insanity which the legalized liquor traffic stimulates. *Prohibition* is fundamentally important to prevent the suffering which the asylum is invoked to cure. The "moral agitation" movement, not long since inaugurated in Mas-

sachusetts—a revival of the old Washingtonian method—if vigorously prosecuted, and discriminating in its teaching, will be timely and valuable help. But moral agitation in behalf of the Temperance cause can not properly overlook political complicity for the perpetuation of intemperance. Temperance men can not masquerade in two characters. They can not be saints morally, while they are politically sinners.

We welcome all helps in the creation of a Temperance public opinion. In this, Temperance Societies, of all kinds, clergymen, churches, physicians, teachers, editors, good citizens everywhere, have a work to do. Opinion is the foundation of political power; but the channel of concentrated action should be opened. We summon, therefore, the earnest and uncompromising friends of Temperance to at once begin the work of organizing *PROHIBITION LEAGUES*, as the basis of the party of the near future, which is to crystalize opinion into statutes for the suppression of poisonous dram-drinking, for the preservation of national integrity, and the promotion of a true civilization.

AN INTERESTING QUERY ANSWERED.

The subject is a very important one, as experts are often called upon to decide whether a given blood-stain is or is not human. Many enthusiastic microscopists have full confidence that nothing is easier than to decide the matter by looking through their instruments, until finding themselves cross-questioned by a sharp lawyer.

Human blood is easily distinguished from that of many mammals, birds, reptiles, and fishes, by the size and form of the globules; and tests, both chemical and microscopical, have been proposed for distinguishing human blood from that of some of the domesticated animals. In medical and legal cases, such, if good, would be of the utmost importance, but it is generally conceded that none exist which can be admitted as absolute. If an observer had given him blood from man and the dog, without knowing any circumstances which would lead to an opinion as to their origin, there is no valid sign which would justify him in going into court and saying which was man and which was not human. The test of odor given off when sulphuric acid is added to the blood, however successful it may have once been in the hands of some experts, has not, after many years, come into use, and that of the size and appearance of the globules also fails, as the globules of some of the domesticated animals offer the same characteristics as those of man. —*Naturalist*.

Toning the Mind.

BY REV. JOHN MONTEITH.

THE somewhat startling statement has been made that every man is unsound. A genial writer, who discourses "Concerning Screws," says this statement is to be limited to *mental* unsoundness. Whether this writer had just turned from reading the last acquittal of a murderer by a jury, we may not know; but if these jury trials furnish any solid data on the subject, we may rightly infer that men and women generally are treading on the brink of insanity.

It is not quite clear that either the writer referred to, or the judicial decisions which provoke our sneers, are all wrong. The color, if not the substance of truth, is here. The causes of the abnormal condition are found in the elements that compose our lives. Scarcely a day passes that does not contain enough of worry, disappointment, or defeat, seriously to disturb the mental balance of a great many people. The real fact, however, is not that insanity or organic unsoundness is thereby entailed, but a simple disturbance or destruction of the mind's temper or tone. Behind mere health, not the cause but the condition of strength and activity which constitute health, is this tone, which is nothing more nor less than that normal ring or vigor, like the temper of the truest steel, which fits the mental faculties to achieve their own health.

In most people this condition is lost by sheer neglect or abuse. Very few ever reflect upon the fact that the habit of the mind should be the object of as much care as the condition of the body. Few indeed have ever become sufficiently acquainted with themselves to know just where their mental weaknesses lie; or just how much the spirit will bear without breaking; or how to guard against the mind's unfortunate moods; or how, when a fit of mental sickness is on, to nurse and tone the inner man (which is too often the inner baby) as a mother nurses an infant. The consequence of this ignorance is, that the mind is grossly overworked, grievously wronged, wickedly neglected, and becomes at once the originator and supporter of a whole brood of bodily infirmities. And what is doubly astonishing is, that the persons whose business requires a constant use of the mind, are the very ones to whom the crime of neglect or abuse too often belongs.

This significant sentence occurs in Benton's "Anatomy of Melancholy:" "Other men look to their tools—a painter will wash his pencils; a smith will look to his hammer, anvil, and forge; a husbandman will mend his plow-irons and grind his hatchet if it be dull; a huntsman or falconer will have especial care of his hawks, hounds, horses, and dogs; a musician will string his lute;—only scholars neglect that instrument, their brain and spirits, which they daily use, and by which they range over the world, which by much study is consumed."

Neglect of the regular care of our mental habits results partly from a false idea of education—conceiving of the work of fitting the mind for a whole life's campaign as ending with a prescribed course of training; partly, too, from the notion that the mental mood depends entirely on the physical condition, and as a consequence, stimulants and narcotics are the most suitable agents to convey tone to the mind.

Many whose sole occupation is thought-work are accustomed to treat the mind as a perpetual motion that feeds itself with the power it expends. They crop the spiritual soil as some farmers crop their acres, requiring it, without renewing its energies, to yield successive returns, until, like an old Virginia or Missouri plantation, it is thoroughly "skinned." It is an offset to absolute impoverishment, as well as a relief to the world for whom their products are furnished, that these uncured minds are connected with bodies that are subjected to regular habits. American literature owes a debt of gratitude to bat'ubs, oat-meal, gymnastics, and well-regulated living generally; but it holds a heavy debt against that neglect that refuses to apply directly to the worn spirit the elements of a new life which lie within its reach.

We must be careful to discriminate between toning and feeding. The mind may receive a constant income of material, more than replenishing the vacancies caused by repeated outgo, still it is only gorged, not recreated or enlivened. The curse of the current literature is, that too much of what is written is a grist discharged from a mental hopper, and not only so but it is often a grist that has been ground in a similar manner many times before. A mind in perfect health will produce no more than is the legitimate increase of itself—an increment con-

taining a portion of its own vitality, a measure of its own individuality, an offspring of its own substance.

Too much of the unhappiness of life comes from a mind that is not impelled by a healthy force of its own, but is ready to be distracted by anxiety, to fall an easy prey to misfortune, or to be slowly eaten up by worrying.

The problem of both happiness and usefulness is best solved by knowing how to keep the mental particles in a proper cohesion, and how to maintain and cultivate that *virtue*, which, in the old Roman sense, is the soul of manhood.

The influence of this normal tone, or the want of it, is readily felt by any reflecting mind. There are times when one can not write or speak, or even act as the occasion requires, not because he does not *know* how, but because he does not *feel* how. The power of instinctive adaptation is gone. He is wholly unequal to the crisis. He takes his pen to write, he has a dim conception of an idea that ought to come, but will not. He may be called upon to utter his sentiments, and he finds a whole treasury of precious material locked, and the key is gone. When the occasion is over, this wealth lies about him like sprinkled gold dust, and he fairly sinks under the chagrin that gathers upon him.

If Sir Wm. Hamilton is to be believed (and experience appears to second his theory), "the infinitely greater part of our spiritual treasures lies always beyond the sphere of consciousness, hid in the obscure recesses of the mind." The point is to get these hiding-places to give up their substance when it is wanted. This point is gained, not by increasing the possessions of the mind, but by changing the relations of what it already has. There are some soils that possess all the main conditions necessary to produce a luxuriant crop, yet they are almost barren. What they need is not more volume but a new treatment—fertilizing, under-draining, subsoiling, or pulverizing—which shall operate as a tonic to bring the already present elements into healthy action. The mind, particularly that of a student or a thinker, frequently, indeed regularly, requires something of the same sort. Intellectual possessions are useless until they are vitalized and resolved by individual intellectual vigor. The elements of success are too frequently absconding thoughts or nuggets of knowledge, or even impulses which lurk away in "obscure recesses," only to return when some special influence shall have brought the demanding power and the supplying capacity into wakeful sympathy. It is claimed that this sympathy can not be secured at will. This

may be true. But it is very certain that many questionable devices are resorted to for the purpose of bringing the lagging faculties to a given work. Were we to invade the sanctums of some who furnish to the world rare intellectual products, we should be amazed to see how even genius depends upon the inspiration of certain old women's appliances, or certain deleterious agents.

There are eloquent preachers, who, possibly laying too much literal stress upon the utterance of the Prophet Isaiah, "How beautiful are the feet of him that bringeth glad tidings," or yielding unconsciously to the principle held by the inventor of Prindle's steamer, that cooked food is the more profitable, regularly produce the hebdomidal nourishment for their people by the application of steam or hot water to their feet. Others never get the mind at work except by the aid of the cigar, or the inevitable *quid*. And men as great as Coleridge, Lamb, and Burns have fed their fires with opium, or the "cup that cheers," and then—"inebriates."

There is a prodigious amount of humbug about the "divine afflatus" which one of our humorists calls the *divine flatness*. The thing sought in this breeze of inspiration so superstitiously "waited for," is simply a healthy condition of the mental faculties, a condition whose cause is only and entirely human.

Every mountain climber knows what this influence is, when, after toil and weariness in resisting the force of gravitation he comes suddenly to some jutting cliff that plunges upon his vision a picture of surpassing beauty, starting into instant action every mode or faculty of the mind, and emptying all the "obscure recesses." Then he feels that he can speak or write, or even play the poet.

This sudden thrill may well illustrate the possibility of stirring the stagnant depths of the spirit, but the means used to produce the inspiration are far too extraordinary to be practicable. The mountains will not come to us at our bidding, nor can we all, Mahomet-like, go to the mountain. A simple process must be quite as effectual. The mind must, and can be taught to recover its better states by a systematic culture, and a thorough discipline. With this training, very simple remedies, and those not brought from far, prove to be equally efficient to accomplish the desired result.

The readiest cure for the worn spirit of a student is a change in his book diet. Robert Hall administered to himself almost regular doses of Lord Bacon, and Robertson of Brighton resorted constantly to his well read authors,

which he could well nigh count on his fingers.

The mind that endeavors to brace itself for unusual effort, commonly seeks its tonics in a sphere higher than that which bounds its ordinary activity, like that One who took his wearied soul to the mountain top, just previous to his most responsible undertakings. A merely jaded mind invariably descends to a lower sphere for relief. Newton, Scott, Cowper, Burns, and Dickens, found abundant revivification in the society of dogs. Dr. Chalmers secured the same object by a nightly roll and tumble on the floor with his children.

Usually, when the machinery of the mind runs hard from any cause, the proper remedy is not books, but something totally different.

Reading is apt to continue in use the faculties that are tired. What is demanded is an entire change of sphere, calling into play an entirely different set of faculties. Just here arises the necessity of amusement in its strict sense, as distinguished from mere physical recreation—something that shall *use away* the mind from its wearying tasks.

The world scarcely knows how much of the good Dr. Lyman Beecher gave to it is really to be credited to his old fiddle. It can not for a moment be supposed that the Doctor found any amusement in his saw-horse. It requires a horse of another kind for that. An earnest Philadelphia clergyman, whose untimely death by accident is now lamented, found that nothing would restore the equilibrium of his whole being like a daily game at billiards. How many have found relief in chess, a game susceptible of the severest thought, yet bringing the strain upon a different side of the mind, and, to some experts, with the most delightful fascination. Indeed, some of those sports that are, for the time, prodigiously exhausting, prove to be equally rejuvenating. Among these is field-sporting, and particularly wing-shooting. How much relief Robertson received from this sport, far more English than American, is evidenced in his biography, which describes him as sitting for hours in a barrel waiting to "draw his sights" on some wary duck.

Society and solitude are both generous nurses, and each has its peculiar dependents.

It is wisely said, "As iron sharpeneth iron, so a man the face of his friend." Nothing corrodes a man's spirit more than loneliness. There is a certain sense in which humanity is a whole of which each individual is an integral factor. Like the parts of a finely adjusted machine, some spirits are made to move together with the inti-

macy of cog wheels. If we could only get the human race properly grouped, and make them stay so, we should largely increase the aggregate happiness. Promiscuous society wears the soul by too much friction; intimate friendship redoubles its strength by adding another self. It is having constantly to meet and conduct ourselves agreeably with those general and indefinite individuals known as "Tom, Dick, and Harry," that kills us. Doubtless there is some precious ore in every human breast that would bless our poverty if we only had it; but the process of sinking the shaft through the strata of strangeness, conventionality, and outward uncongeniality wears us out. What we need is to approach a few spirits by the adits we have already made and worn well.

Vigor of mind tends to decrease, and the individual type to become dull, because of the decline of friendship and the higher order of conversation. There are too few *coteries* among congenial spirits like those which brought Cowper and his friends, and Lamb, Hazlitt, and Wordsworth into daily intercourse.

The importance of definite friendship grows as you reflect upon it. Not only are there bright minds that would be brighter with frequent friction of kindred spirits, but the masses of toiling, struggling beings who drag their life as a heavy burden, are waiting for nothing as for particular sympathy; not the corporate pity of a benevolent association, that so often contains a measure of contempt, but a fellow feeling that comes from a particular interest in themselves, as well as their circumstances.

Society and Solitude have each their own patients, and the one will sometimes kill where the other will cure. It would never do to cramp Wordsworth into the crowded streets of London, nor to scatter Charles Lamb among the hills of Grasmere, or the objects of the Descriptive Sketches. Yet it may be questioned whether a certain amount of nature alone is not necessary to the healthy tone of every spirit. Certain it is that Nature is a most generous and constant nurse. She has a pad to put just where the heavy burden galls the mind, an elixir to spread a new life over every desponding heart.

"She has a world of ready wealth
Our hearts and minds to bless,
Spontaneous wisdom breathed by health,
Truth breathed by cheerfulness."

Many very good people have witnessed with horror the exodus of the multitudes from the

heat of any large city to suburban groves and gardens, whensoever the summer Sunday morning brings the suspension of work. Various devices have been attempted by which to seize these wandering souls and confine them in the religious crypts and holy cells of too many of our city churches. Still they go, and the throng increases with each successive year. These life-ridden spirits simply obey a law of their being, that impels them to restore the waste that a week of confinement and hard work have left. They follow often that teacher which "breathes truth by cheerfulness;" they crave

"One impulse from a vernal wood,"

that shall carry alacrity to the slow, heavy toil of the cheerless week. If the churches ever design to bring these restless beings within the range of "better influences," they must abandon the conceit of medieval gloom in the edifice, song, and sermon, and more closely imitate the healthful cheer and tonic inspiration of Nature's cure.

Variety of food has as much to do with the healthy tone of the spiritual as the physical condition. It is by no accident that we live in a world where the healing leaves of good books, where beauty of flower, and sunset, and sky, and landscape, and happy faces, is so abundant, and so cheap. A little of each administered daily with that physical exercise which is necessary to obtain them, will greatly help to keep the mental machine in prime order. Here right about us are a hundred hands ready to lay hold of the great loads of care and let them down easily, so that they leave without grazing us. Here are the particular applications that will bring the royal specific to each particular ill.

To gather stimulus for special responsibility, we sometimes resort to helps that are in their nature quite unlike the duties that press us. I know of at least one preacher who, before the work of preparing for Sunday has begun, seeks to regale his spirit with the works of the best masters in galleries of art. Another visits a stock farm, where, among Morgans, and Gold-dusts, and Shorthorns and Cotswolds, and the great variety of bipeds and four-footed beasts, all in a high state of development, he brings back the flush of Hebe to every fiber of his spiritual nature, and comes to the work of Sunday with the vigor of an athlete.

It is with a profound respect for the advice of the fathers who have gone before us that I suggest a mode of preparation for spiritual and mental duty, quite at variance with, if not directly opposed to that which they insisted upon.

Very natural was it for them to recommend devotional seclusion as the only proper preparative for the experience and responsibilities of life. Their advice rests on the assumption that there is an antagonism between things spiritual and things temporal. But upon the broader basis of St. Paul, who says "all things are yours," religious culture embraces all things that minister vigor and healthy tone to the mental functions, or in any way fit us for duty and trial. In this view, the closet and the field are closely allied; the Bible and Nature speak the same thing, and the sports and amusements that have too long been branded as "worldly," become, with the more private exercises of a devotional mind, the co-builders of a higher manhood.

The great problem of life is not how to abolish its duties or difficulties, nor even its petty annoyances; but rather how, amid all these, to keep body and soul in the easy exercise of their respective functions, and to throw a pleasant aspect over all gravities. A little study will soon convince us that if the world we live in is properly used, it will command for us its richest treasures, and in the long run of a short life we shall always find riches ready to help poverty, cure to remove disease, happiness to supplant misery, and, for the mind at least, all remedies and maladies placed in the most glorious juxtaposition.

OUR KITCHENS.—You are fortunate if your kitchens have a sunny outlook. A south window catches all the precious winter sunshine, and is not as uncomfortable on account of heat in the summer as an east or west window. Sunshine goes a great way toward furnishing a room, as well as driving care, fatigue, and disease away from those who live and work in it. Of course you may not all have model kitchens though you may so much desire them, and just here comes to my mind this quaint old rhyme, which applies to housekeepers for aught I see as much as to any other class.

"For every evil under the sun
There is a remedy or there is none.
If there be one, try and find it,
If there be none, never mind it."

—Mrs. Katy Jackson, in *Laws of Life*.

EVERY productive occupation which adds any thing to the capital of mankind, if followed assiduously with a desire to understand every thing connected with it, is an ascending stair whose summit is nowhere.—*Froude*.

The Education of Our Daughters.—THIRD ARTICLE.

BY MRS. E. B. OLLESON, M. D.

EYES.

TROUBLE with the eyes is becoming very common among our pupils in advanced classes. The normal eye is capable of an almost infinite variety of uses. It can see near and far with equal facility, but like any other organ, if used almost exclusively in one direction, it loses its range of ability. Hence, if kept too constantly on the printed page, the range of vision is impaired, and it may become near-sighted by much reading of fine print.

Even small children injure the eye by an unnecessary infinity of detail in their lessons, which requires too close and constant use of the eye. For instance, No. 5 Geography, for use in our schools, is excellent for reference when reading, but it is a waste of valuable eyesight for any child to hunt out and memorize so much, in the way of rivers, towns, etc., which will so soon be forgotten. H. W. Williams, M. D., in the January number of *The Atlantic* says: "One of the first rules laid down by a teacher to his pupils should be *not* to keep their eyes fixed upon their books. Apart from the probable injury to the eye itself, by too close application, I am satisfied that lessons, especially those requiring thought, can not be as well committed to memory when the eyes are fixed upon the page, as if they are permitted to wander. The eyes must, of course, look at the book often and long enough to take in the idea, but if they are too steadily kept there, the perceptive power seems to occupy itself with the visible objects to an extent which is unfavorable to other mental processes. A distinguished engraver once said to me, "I know now how to make a face think." And he explained that the secret lay in giving a certain expression to the eyes by causing their axes to have a very slight divergence from each other. This corresponds with my observation, and this *position of thought* is exactly the opposite of that assumed by the eyes when looking at a book.

We have long known that the eye is often injured by looking at the sun, in case of an eclipse, without the aid of smoked glass, the perceptive power being impaired by excess of light and heat. It is also often injured by looking at small objects with too little light, as, for instance,

reading fine print by moonlight. But we are yet to fully realize how often the eyes are injured by strong gas-light. It is often too intense, and has a flicker which is particularly trying without a shade. Those accustomed to gas or kerosene, find it difficult to see by candles or any light less brilliant. But those who have habitually used candles, can not only see well with less light, but their eyes last longer without the aid of glasses than those who have rejoiced in the flood of light which the gas-burner emits.

When the optic nerve has become supersensitive to light, a good candle is a great relief. Of course, it will not make the room bright as gas or kerosene, but will furnish light enough for reading, and the soft light will be much less trying to the eye.

Twilight is very grateful to the eye if we rest in it, but very trying if we read or sew in the transition stage from day to night, or night to day. The use of artificial light at early morning is very bad for the eyes, much more so than at evening. To go from sound sleep and deep darkness into the light of gas, especially for study or piano-practice, is very injurious.

Within a few weeks, several young ladies have consulted me in regard to their eyes, where they have been seriously and permanently injured by piano-practice at early morning in the gas-light. As the music can not be changed to suit the exact focus of the eye, it is the more likely to become injured in this way, than in most other ways.

The study of any foreign language is much more trying to the eye than the reading of one's own. The words lack the familiar look, and hence they are not so easily recognized. The searching for words in the dictionary is particularly hard for the eye, and if the alphabet be dissimilar to ours it is still more trying. Hence, those who have weak eyes, and those who don't want to have them, should avoid piano-practice and lexicons by artificial light, especially at early morning. Those whose eyes are in any degree sensitive, will accomplish more in the week or month to study only by daylight, and during the evening avoid gas and give themselves up to plain knitting and cheerful conversation; for deep study, close thought

even, if the eye is not used, tends to determine the blood to the head, and makes the eye worse if it be inflamed or painful. Embroidery, or even any kind of worsted work, is bad, as bright colors tax sensitive eyes very seriously.

Reading from a moving page is also trying to the eyes. Many persons who have traveled much, tell me they have permanently impaired their sight by reading on the cars. Young ladies who go out to walk with a book cheat themselves in two ways. The exercise they get is not good for any thing, and the moving page and the brighter light than within doors, injures the eye. To make bodily exercise profitable the brain must rest from books, and send its nervous and circulatory force into the muscular system.

Double Latin is often taken to make up arrears, or to be ready for an advanced class, and by this course many eyes are impaired for life.

English Literature, in which almost all young ladies are greatly interested, is a strong temptation to over-study. There is so much that can be read, that they want to read, to be ready for the next recitation, that the hours for sleep are too often curtailed. The preparation of the class essay is a great stimulus, for as the predecessor furnished one that was excellent, the successor wants a better. Young ladies should remember that they can not complete English literature at college, and they had better save their eyes so that they can continue it in years to come. It is comparatively little that they can do in this department in connection with so many other studies, without neglecting other duties and impairing their health. Indeed, they should regard their four years course as a period of incubation, expecting to come out, not with dim eyes and distracted nerves, but in the full possession of all their powers, so that they can keep growing intellectually, learning for years to come.

Those having weak eyes ought to room alone, that they may regulate the light to suit their comfort. Strong light in the room, even though the eye is kept shaded or closed, tires and gives pain when the optic nerve is sensitive. Such need to sleep all they can, and if they retire before their room-mates, they are often kept awake, and the presence of the light wearies even the closed eyes.

DIEET.

Students who apply themselves closely, need to be well nourished. It requires good food and a great amount of it to make the brain work well, and not impair the body. Sedentary habits often induce indigestion; therefore, many

have supposed the less they ate the more they could study. About twenty-five years ago earnest persons with limited means worked and studied very hard, and ate and slept very little. Many a good constitution was thus ruined. Nervous dyspepsia was often induced by over-work and lack of suitable nutrition. The more abstemious they were as to food, the less able they become to dispose of what was taken. Many of our ladies not pinched by poverty or pressed by hard work, lose their appetite by too little exercise, too little sleep, and too much study. This course, if long continued, will induce indigestion. The nervous system being exhausted through brain-work, has not power to carry on the bodily functions, and the victim wonders that she should have any stomach trouble when she had eaten so very sparingly. The truth is, limited nutrition has induced indigestion.

The morbid appetite of school-girls, for which they are often blamed, or ridiculed, is a nervous disease brought on by impaired nutrition. There is a lack, a longing, "a sense of goneness," which craves but lacks relish for healthful food. Men suffering from this, take to beer and alcoholic drinks; women more often to tea and coffee in excess, and school-girls to chalk, slate-pencils, cakes, candies, etc. A busy brain, as well as an active body, requires beef, bread, oysters, eggs, vegetables, and fruit, all well cooked, and plainly prepared. Physiologists are making investigations as to what food is suited to supply brain and nerve-power, and physicians are talking of remedies best able to restore it when lost, and perhaps in years to come, we may have a bill of fare exact and definite for those who wish to work with the head, and another for those having hand-labor. But certain it is that those of intense mental activity ought not to be helped on, and hurried on, by stimulants, or they will die before their time. Stimulants may be useful for emergencies, for sickness, or for advancing years, but young life, with its enthusiasm, does not need the aid of tea, coffee, or alcohol, unless impaired by sickness or over-work. These will help one through a hard lesson, or a night's gayety, but if it be persisted in, it is at the expense of strength for the years that follow. Tea makes our girls over-excitable, wakeful, nervous. Coffee induces constipation, yellow skin, and mental depression. Washerwomen take their strong tea and "wash it off," work it off through the muscular system, and are ready to sleep. Our sensitive girls take it and are bright for study, for social life, but are wakeful after, and they come to

live on tea and coffee, and care less and less for plain nourishing food. There are few chronic individuals so hard to cure as those who have long studied with too little food and too little sleep. If girls must study too hard, if women must work when they are not able, or if they must be social and gay when they do not feel so, then tea is their best aid, the stimulus safest and best, and very efficient if not relied upon constantly. If needed, it is best in the morning. At night it makes one wakeful, and hence should not be used, save when we *must* sit up, and then it is as good as the Irishman's whisky, which was "virtuals, and drink, and lodgings." But if used two or three times a day, then something stronger is wanted for extra occasions, for emergencies.

School-girls remain plump and fresh sometimes when they are but imperfectly nourished. The brain work brings a determination of blood to the head, which gives a flushed face. Beside this, those of studious habits are likely to suffer from torpidity of the excretory organs, hence the system is plump from being loaded with effete material which should have been thrown off by way of the skin and bowels. Thus, what seems to be strength, is merely weight, weariness, an excess of adipose, with a poverty of muscular tissue. In such cases there is a craving for something to eat, but a lack of appetite for regular rations. The whole system is surcharged with impurities which should have been thrown off, and this depresses the appetite and disturbs digestion.

Half the complaints of school-girls about food are the result of lack of relish. Then they feel half famished and nibble cakes, crackers, and candies between meals, or have a box of "goodies" from home, and these will certainly destroy all desire for bread and meat. Of course in supplying a table for large numbers there must be a lack of deference to individual tastes, which can only receive attention in the home circle. But the need of change in occupation, quite as much as in food, causes nine-tenths of the trouble about fare. Over-study, over-anxiety, too little sleep, too little exercise, too much sugar take away the appetite, and those who can not eat should not study, for nerve-power is thereby permanently impaired.

EXERCISE.

Our girls, amid the multiplicity of muscular work have less strength than time, for mental activity. They have no elasticity, no exuberance of life, to expend in sheer physical exercise. There is no fun and frolic left, and

they ask with a forlorn face, and languid air, "Can't I be excused from exercise?" and look as if they wanted to lean up somewhere and think, like Mark Twain's mule, in which case I fear their thoughts would be neither brilliant or cheerful. Young ladies out to walk, with ribs compressed, arms pinioned, staid as a funeral procession, going from a sense of duty, or in response to school order, get a little fresh air, but much less than they would if there was freedom of chest, and fun and frolic to prompt the free inspiration, the exhilarating exercise. The discipline at our military schools is found excellent to develop the chest, improve the step and general bearing, and to correct physical defects, etc. Gymnastics—Dio Lewis's system—should do the same for our girls; but, to accomplish this work, the young lady should not only have her period of daily drill, of an hour or so, but should be dressed so that she can breathe deep, and sit erect, without whale-bones or braces, and walk without hinderance at all times. Instead of this, after the exercise to expand the chest, she goes straight into the compressors again. While in uniform, she is careful to stand straight, to walk erect; but when once "be-furbelowed," the *dress* is *all*, the position nothing. Some of our schools have very fine facilities for physical culture. But the pupils are usually too hurried, too tired with their lessons, to get much benefit therefrom. Gymnastics, riding, skating, rowing, etc., must consume both time and strength. For instance, a mother asks me if riding lessons will not be of advantage to her daughter? Upon examination I find the young lady is already so burdened with lessons, that she is worried and nervous, and can not eat or sleep as much as she ought. Horseback exercise would do her good if she could take a good sleep after it. But tax her delicate frame, which scarcely weighs eighty pounds, with severe physical exercise, and then send her in to hard study before resting, and it is making a bad condition worse. We must have nerve-power for muscular exercise, as well as for mental activity, and the secret of good health and good scholarship, is to properly divide this life-element, between the wants of brain and body.

SLEEP.

Good scholars need more sleep than they are inclined to take. The interest in lessons, the increased activity of the brain, makes them wakeful, and often the more they need sleep, the less able are they to find "the dominions of the drowsy gods."

In the majority of our large schools I find the hour of retiring to be 10 o'clock, and of rising at 6 o'clock. This will do for some, but the younger and more sensitive need from 9 to 7 in winter, and from 9 to 6 in summer. I would give them an hour longer during the long nights, because at best, students study more by artificial light than their eyes can well endure. In cold weather they are more inclined to keep close to books, less inclined to out-door exercise, and hence are better off in bed cold mornings than anywhere else. The indications of all nature are that at this season we should sleep up, rest up, and be ready for summer gayeties. But in modern days, between bright lights, gay colors, lectures, concerts, and parties of varying brilliancy, the brain and optic nerve are overstimulated, and summer finds too many of our young ladies, whether in school, or in social life, in need of summer restoratives, such as the sea-side, the mountains, and mineral springs afford. Students do not get as much sleep as their hours in bed seem to indicate. If they have studied closely and to advantage in the evening, it takes some time to arrest the mental action, to cool off head-wise, so to speak. Intellectual activity makes them dislike to retire at night, and brain weariness makes them dread to rise in the morning, and they get up feeling wretched and as if they *never did* and *never could* learn any thing. Hence, while they might retire before the required time, they do not want to, and would not get any sleep if they did, while the school world in which they are so much interested is all astir. When once asleep, they go on until a late hour if not called by duty, as is shown by the many who sleep over the breakfast hour, and go without that meal if not obliged to rise at an early hour for morning prayers. Instead of giving a general permission to retire early, and requiring all to rise early, we would reverse the order, and require all to retire early, and let them rise when they had slept all they wanted to.

SCHOOL-GIRLS OVER-ANXIOUS.

Those who have had the most experience in our best schools, maintain that our young ladies are over-ambitious; that they try to do too much in too short a time; that they are much more sensitive to class-standing than boys; that they are more elated by success, and more depressed by failure; that, rather than suffer the latter, many are ready to sacrifice food, sleep, rest, recreation, and that many fail by reason of over-anxiety. As a Professor once said to me, "the girls would get on well enough at school if they were not so sensitive." "True," I re-

plied, "but then they would not be girls." It is a part of their organization, and ought not to be deprecated, but so directed as not to take on morbid manifestations. In the fear that they shall fail, they study too long on a lesson and get mentally muddled, and hence do fail at a recitation from sheer weariness of head. They say sometimes, "The more I study the less I know," and this is often true. It is not the number of hours, but the life, clearness, and strength which we bring to the lesson, that accomplishes the work. When these are exhausted, the book should be laid aside. In lack of a good night's sleep they may fail to recite a lesson well learned the day before, or may fail to learn the present lessons, though they bend the head and fix the attention till the neck aches and the eyes are dim, simply because the head, so to speak, is so weary it can't work.

Between science and literature, music and mathematics, ancient and modern languages, art studies, and general esthetic culture, our young ladies have undertaken more than they, with their small waists and weak spines, can well accomplish. Let each one look over the list and decide which they will leave, and which they will learn. In view of the many things which they may, can, must, might, could, would, or should study, I have inquired of their professors as to what class of studies seemed best adapted to their mental organization, and from the report given, there must be much good scholarship among them, or else much credit given on the score of gallantry. Each teacher would claim that they were remarkably successful in their department, better on an average than a class of gentlemen. For instance, the Professor in Mathematics would say that there was a nicety, an exactness in "feminine minds," which fitted them peculiarly for figures, and made them enjoy greatly the results. The linguist will say, "Young ladies are so interested in literature, appreciate exquisite renderings," etc. The teacher in the natural sciences will tell you the world of nature is just the field for women. The physical sciences give them so much pleasure in out-door life, and teach them much that is of practical utility. I too have looked with interest to this department, hoping it would afford permanent interest to our daughters, so that there would be continued and profitable study after leaving school, and, thus, less tendency to fiction, embroidery, and "fancy fixings" generally. I have hoped that a more intimate knowledge of the world, above, beneath, around, would render them more steady and sensible, and less nervous and excitable.

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

WEDNESDAY, December 6.

THE past two months have been so filled with work that I could find no time to devote to my diary. Aunt Minerva's illness, house-cleaning, and a houseful of company have fully occupied me; but now a time of comparative rest has come. I have lately had an opportunity for observing the evil effects of intemperance in its most common and repulsive form. We often hear people talk as if real misery were confined to large cities, but they err, if they think there is not plenty of it in the pure, sweet country; although it would seem as if these characteristics should aid in drawing men away from the evil up to the good and beautiful. Henry was called two weeks ago to a family whom he found in a wretched state. They are living in a large house, but, for the sake of warmth, were huddled together in one room.

The family consists of a husband and wife and seven children, the oldest of whom, a girl nineteen years old, is married and has three children of her own.

Thus, there were twelve persons in a room fifteen feet square, and all more or less sick, except the father. When I went to see them, I found it almost impossible to help them to advantage. The old man was usually in an ugly state of intoxication. There were always from five to seven children on the bed, and the other members of the family lying about the floor, in various stages of sickness, but one state of dirt. The one cause of this is intemperance. The father has for years grasped every penny that has come to them in any way, and turned it into the thing which he continually craves. The first time I want to see them, the youngest child, about two years old, lay in a cradle—a very sad little picture. He would have been a beautiful child, if he had had the kind care of a good mother. Improper diet and ill-treatment soon leave marks which can never be effaced. The child was so weak that I did not think it safe to recommend a bath, as he had previously been so unaccustomed to water. But I washed off his face, hands, and feet; and, when I found that he had no clothes but those in which he had been lying for an unknown length of time, I went to Mrs. Hutton's, and soon had a sufficient supply to keep the child in a state of comfort for some time. They were not needed long, for one

evening, soon after, they sent for me to assist in laying out the child. What a scene it was! The mother in an agony of weeping and sorrow; for, in spite of her degradation, she was a mother, and her heart was still tender with the recollection of how the child clung to her in his last days, and how his last touch and look were for her. The father was sitting over the stove, apparently not caring one jot for the loss, and turning his wife's lamentations into ridicule. The mother wanted a woman from the village to give her some assistance, but, in answer to her entreaties, her husband growled, with frequent oaths, "What's your hurry; your young one won't get cold there—there's a good fire." And when a fresh thought of her affliction caused the woman to cry out, he chuckled and said, "There'll be no more rocking the cradle for you—no more rocking the cradle." He could have thought of no more subtly cruel thrust than this to a mother's heart. How very sad such scenes are! It sometimes seems as if there were no remedy for these individual cases. I do not believe that this man could ever be convinced of the evil of his course. The great hope is in talking to younger people, whose habits are not fully formed.

If all the children in the land for the next two or three generations should be educated to strictly temperate habits, and this in its broadest sense, self-restraint in *every* way, then might we hope for a purified race in time to come.

Mrs. Woodman, who has a young baby, told me the other day that she had actually been advised by a kindly, well-meaning lady to give her baby plenty of milk-punch, and she would be sure to have a good, happy baby. This person has a large family, and considers her having *nourished* them all with this beverage as the height of good management. I had heard of the custom, but thought it had been discarded entirely among sensible people.

Friday, December 8.—We spent last evening at Mrs. Williams's. She and her husband are most estimable people in many respects; but do not seem to have learned the lesson of living happily, nor do they conceal their domestic infelicities from others. Mr. Williams is continually finding fault with his wife, and has done it so long,

that his head and neck have taken a fault-finding expression, by which he can be recognized as far as he can be seen.

The two daughters have adopted a similar tone, and the object of their united complaints is their mother. She is patient, and tries to ward off all appearance of consciousness. One can but pity her and love her for her meek and quiet spirit; and yet is this sort of meekness right? Would it not be better for a wife to take a decided stand, in the early days of her married life, upon the first appearance of a fault-finding spirit in her husband, saying to him with all love and gentleness, but at the same time firmly, "We are both faulty, but it is natural that we should see the defects of each other more plainly than our own? You are drifting into a habit of venting all your nervousness upon me, for any thing that you see, or imagine, to be not quite as you would like it. And now, whatever you think in your happiest, most contented moments, to be a fault of mine, please tell me as faithfully as I have spoken to you, and we will together strive to overcome the evil that is in us." Many a woman becomes a wife with warm, earnest love for her husband, and a Christian resolve to be a good, faithful wife. When the first harsh words come, she bears them with Christian submission, considering it a part of her duty; but when the bitter words come so frequently as to threaten the formation of a habit, it is time for her to lay aside some of her submission, out of consideration for her husband's best interests as well as her own. Not indeed, in order to adopt a worse extreme, that of wordy retaliation, but that firm, medium course which must be better than years of self-renunciation. It is very comfortable for a husband to be able, after a wife's death, to look back upon her as an angel upon earth; but it would be an equally agreeable consolation, in case of the husband dying first, for his mourning widow to remember him as possessed of some saintly attributes.

Monday, December 11.—We were amused last night at Aunt Minerva's receiving a Sunday evening visit from Deacon Brown, one of the stiffest of Aunt Minerva's stiff friends. He came home with her from prayer-meeting, and spent a formal hour with her afterward, entertaining us with an exposition of his views of election and predestination. It is quite evident that he considers himself elected and fore-ordained to be Aunt Minerva's second husband. I do not think Henry and I shall object to the arrangement, but will cheerfully resign our legacy to

the safe keeping of Deacon Brown, or any other deacon who may desire it.

Thursday, December 14.—Our Madge is an endless source of amusement and vexation to us. I endeavor to have the amusement keep the upper hand, remembering the advice of kind Mrs. Hutton, who said to me one day, "My dear, I think that discontent with servants may come to be almost a mania; and I hope that you will take a bit of advice kindly from me, viz.: when you are particularly tried with the failings of a servant, to think right away of some balancing good quality." Madge may be said to have an "evenly balanced" character, if we fill our test measures, with defects and virtues; for when she is most aggravating by her faults, we can always recall good qualities. She is thoroughly honest, scrupulously so, very zealous in the care of any thing left in her charge; and, with one exception, she is truthful. She will tell the truth, even when it brings her into disgrace, except when she speaks of the wages or condition of any "gurl" or "b'ye" of her acquaintance. She has no female friend working for less than \$18 per month, and then, only in the case of her living in a small and economical family. In addition to their wages, all their clothes are given them, their mistresses have them cut and made, and occupy their leisure moments in piecing bedquilts and having them quilted for their happy domestics. Her "b'ye" acquaintances receive from \$30 to \$50 per month, for their condescension in assisting their employers; but I have not yet heard of their being furnished with bedquilts. The only inconvenience to us in this departure from the truth is the necessity of performing an example in mental subtraction each time that our Madge is confidential about her "comraids." Curiosity is one of her leading characteristics. For four months she has asked questions of me, in regard to every thing of general or particular interest that did not concern her; for four months she has received answers that have left her as ignorant as before the questioning. In other words I have *snubbed* her for this length of time, and still her inquisitiveness survives. She accepts my snubbings with a sigh, and she retires from her catechising attempts with an ever-increasing admiration for her "misthress" ability for keeping silence. I have frequently heard her reply to inquiries of neighbors in the pursuit of knowledge: "An' shure, what shud I know about the matter? Wud ye have the misthress be tillin' all she'd be about? I knows nothin' till I sees it." When she first came to me, she took

the liberty of inquiring the source of our letters; but I politely informed her that this did not constitute a portion of her duties. She accepted the condition, but thereafter commenced a diligent study of the addresses of the letters she brought from the postoffice; until now, in spite of her not knowing how to read, she not only knows for whom each letter is, but can also tell the handwriting of certain friends. When she brings a letter from any one of these she comes to me with a confident and jubilant expression, and salutes me in this wise: "An' here's a letter from yer brother," and, before I have the envelope torn off, "and is he well, and will he come to see us soon?" If she is in doubt as to the address, she will say, "An' I suppose yer letter is from Mrs. L.?" No. "Oh, I see, I mistook the writin'; it is from Miss G. then, isn't it?" No. "Ah, an' where *can* it have come from then?" No reply. Madge withdraws from the scene, with her usual sigh to solace herself with the pursuit of some kind of knowledge attended with less difficulty, or with scolding the cats, of which quite a regiment has come to us. The cats stand in great fear of Madge, for they are obliged to receive the sharp words which she would bestow upon one of her own race, if she had him or her at hand. After she has given the cats their meals, she throws the outside door wide open, gives a shrill whistle, and calls, in her harshest tones, "Out-of-doors wid ye, the whole facsbin of yez." With one accord the six cats rush wildly out, just in time to escape being mashed by the door slammed behind them. In his first acquaintance with our Madge, one of the flock attempted to resist her authority and maintain a position by the warm kitchen stove, growling, spitting, and glaring at her with defiant eyes whenever she approached him. This aroused the energy and pugnacity of her Tipperary nature: "An' is it fightin' wid me ye'd be? An' ye shall have enough av it." These words accompanied by a vigorous use of her broom soon reduced the rebellious cat to a state of submission. We find plenty of cats a valuable scapegoat for Madge's tongue. Another servant would be more acceptable to her, as the quarreling and scolding would then have two sides; but her employers prefer the cats, as they do not in their case feel obliged to interfere, except when blows are added to words.

Wednesday, December 20.—Lightwood may justly take to itself the credit of having inaugurated something new under the sun, viz.: an Anti-Scandal Society. This is but part of our name, our appellation being adopted in the

midst of a great deal of laughter, but, at the same time, with a firm determination to exert some influence through our united efforts: "Mutual Improvement and Anti-Scandal Society."

Christmas.—How thankful we should be that God has given us the means to do something for His poor on this sweet day! One pleasant privilege we took to ourselves for this day, of only giving to those really deserving and appreciative of favors received. There is one poor family who do just the best they can in their life-struggle, but can not get beyond a certain point. The father is in rather feeble health, and the mother, naturally sickly, has had children so rapidly that she has never had time to get perfectly well. They have ten children, eight of them living at home. They are lovely children, for what the parents have wanted in strength of body, they have had in strength of mind, which has enabled them to govern their family properly. What beaming faces the children had, when Henry and I went in with a basket of presents for them this morning! They have learned so thoroughly the virtue of self-denial, that it was like a glimpse of Heaven to them, to be at once, and so unexpectedly, gifted. We took them a supply of good, warm clothing for the winter, books and toys, and plenty of nice fruits for them to eat freely of them. And at noon we sent the family a good, warm Christmas dinner, which we thought was preferable to inviting them to our house to partake of dinner, as there they would be under restraint, and not take the full enjoyment of their good things. How true it is that it is more blessed to give than to receive! There is nothing which can so warm our hearts as giving, and especially at Christmas Tide. And there is no other day that so appeals to the maternity existing in every woman's heart, whether or not she has children.

Cynics may sneer at the childishness of "these Christians," who are so enthusiastic over a day, which, after all, is not the anniversary of Christ's birth; but their sneers are of little account, when we think of what we are commemorating. Every Christian should try to make it a still merrier day, a day of *sacred* merriment. We can not be too joyful—our every word, our every look, our every thought should be full of, "Christ is born, Christ is born, Christ is born!"

January 1, 186.—The custom of New Year's calling has been adopted by the young people of Lightwood, and, I am sorry to say that, with

the importation of the fashion, has come hand in hand, the habit of serving the guests with wine. At the first meeting of the Mutual Improvement and Anti-Scandal Society, this matter was discussed. There are three unmarried ladies in our number, and they promised to give up the habit, and to do their best to induce others to do the same. We have already seen some young men pass in a state of noisy exhilaration, which shows that there are still some wine receptions. Fashion will often accomplish much, where principle has no sway, and this, I hope, another year may show is the case in Lightwood. For the young ladies, who agreed to discard wine, are the leaders of young society here. Aunt Minerva declares that it is a good old custom, that there is no harm in drinking wine to moderation, that people in old times were just as good and better than now, etc. etc. We do not argue with her, but think our own thoughts about that private brandy bottle, which she never allows to get empty.

January 3.—To-day I had the pleasure of trying my new pony and a comfortable cutter, which have just been brought home to me. I invited Aunt Minerva to take the first ride with me; but she declined, for the reason that her neck was too precious to be intrusted in my care.

Perhaps she was thinking of Deacon Brown, whose courtship progresses rapidly. The Deacon evidently intends to conduct it with business-like exactness and rapidity.

After Aunt Minerva's refusal to go with me I took Mary Morgan out with me. Her mother lifted her in like a baby, and I gave her a ride of about two miles. Her glad, happy look was an abundant reward.

After this I took Miss Margaret Stanton out for a short ride. The old lady is full of trouble. A favorite nephew and his wife have recently died, leaving two little children, with nobody to care for them. They are far out West, and Miss Stanton feels it her duty to go and look after them. At her time of life, and unaccustomed to travel as she is, this is a serious undertaking. Her resolution to go adds to my conviction, that, inside of her hard shell, she has a sweet and tender kernel of character.

Perhaps these little children coming to her may be just the softening influence necessary to the bringing this tender nature of hers to light.

When is a man like a tea-kettle just on the boil? When he is going to sing.

CAUSES OF ERYSIPELAS.—According to the opinion of some, the causes of this complaint are too numerous and diversified to admit of any definite specification. Nevertheless as a general rule it may be assumed that whatever tends to disorder the digestive, hepatic, or any other important function, is capable of producing the disease. Seldom, if ever, does a case of erysipelas occur, in which such derangement does not play a more or less conspicuous part. If people would live more on food derived from the grains, fruits, and vegetables, drinking only pure soft water, and less on swine and other flesh meats, grease, salt, pepper, and spices, and abstain from the use of tea, coffee, and alcoholic drinks, the time would not be far distant when this fearful, dangerous, loathsome disease, would be known only as of the past. Among the exciting causes may be mentioned the retention of vitiated secretions; certain kinds of indigestible articles used as food, such as some of the different kinds of shell fish, etc.; great mental excitement, loss of sleep, hard study, suppression of the cutaneous perspiration, and, in short, whatever tends to enfeeble the organic functions.—*Dr. J. C. Whitaker.*

SOBER CHILDREN.—Joy is one of the main factors of mental development. The intellectual rank of any creature may be measured by the playfulness of its infancy. Who would buy a puppy with not a streak of fun in him, or a colt with no more friskiness than a worn-out cart horse? Your sober colt or puppy is either sick or stupid; and so, as a rule, is your habitually sober child. Go to our asylums for the weak-minded if you want to see patterns of sobriety; next to them the homes of intemperate and vicious parents. The fun-loving propensity of such little miseries, if they ever had any, has been crushed into untimely soberness by disease or ill-treatment, and they are not bright.—*College Courier.*

HOW TO RECOGNIZE THE CREATOR.—Froebel says: "He who will recognize the Creator must early exercise his own creative powers; exercise them with a feeling of consciousness for the representation of the good; for works are the bond that next to faith unite the creature with the Creator; and the conscious doing of the same is the real living union between man and God; alike in the individual or in the race. With all this education must begin, and to this end it must always tend."

At the Cross.

BY ELIZABETH OAKES SMITH.

BEFORE thy cross, dear Lord, I fall;
Out of the depths to thee I call;
Thou art my Hope, my Help, my All.

Search, search my heart, surcharged with woe,
Till all its idols it forego,
And thee, thee only learn to know.

A thorny path with flints bespread,
With bleeding feet I fearless tread,
For thy dear hand upholds my head.

Oh, dearest Lord! thy tender eye
Rebukes, yet pities my lone cry,
When staggering 'neath my cross I lie.

The broken cisterns, who shall count,
The heart will fill at Earth's dark fount,
Ere upward unto God it mount!

Poor human heart, with human needs!
How many are its broken reeds,
Grasped till the hand in torture bleeds!

How many gourds have felt the blight!
How many stars have lost their light!
How many suns gone down in night!

All, all are gone, like barques at sea
Lost in the dread immensity!
And now I stand alone with thee.

All prostrate at thy feet I kneel,
For thou canst all our sorrows feel,
And thy dear hand our wounds can heal.

No more I mark the dreary road
My bleeding feet so long have trod,
Since it doth lead to thee, my God.

Railway Travelling.

BY REV. CHARLES H. BRIGHAM.

THE passion for travel is a genuine American characteristic, noted by all foreigners, and complacently acknowledged by Americans themselves. The Yankee is a cosmopolite, and if he has a home, is yet not willing to keep at home, but wishes to be known as one who has seen the world. Occasionally you find an eccentric American who prides himself upon the fact that he has never left his native town, and can always be found in his own house and shop, year in and year out, at the regular hours. There is a wealthy citizen of a Massachusetts town, through which three railways pass, who used to mention with satisfaction that he had never in his life been ten miles away from his birth-place, and had never set foot in a railway-car. His singular whim was only less remarkable than that of the Nantucket whale-captain, who lived to the age of seventy, and twice sailed round the globe, without ever landing upon a continent. But the opposite passion is far more common. Even those who stay at home most of the time are anxious to have you think that they have been away, and have seen other than the domestic landmarks; one lady thinks that she has been a "great traveller," because she has visited half a dozen cities within a hundred miles of her home. The large sale which books of travel get is an index of the real feeling. Not boys only, but men and women, in our land, love to read about adventures in Africa, and Siberia, and Alaska, and follow with genuine sympathy the wanderings of their pilgrims even in waste and desolate places. There are few who at some time have not wished, almost resolved, to go where nobody else has gone, and see what nobody else has seen. The Italian is willing to die after he has seen Naples; but the American is not ready to die until he has seen all in the world below that is worth seeing, and much, too, that is not worth seeing, from the tropics to the poles. Americans are willing to travel in uninteresting places, and to pay liberally for mere locomotion. Nay, after death, they expect to keep on journeying, to visit some of the planets and stars.

" Fireside travels " may do for a few lazy men, but most of our people will not be content with that imperfect vision of foreign things, in which the imagination has so much part. We wish to see with our own eyes what the

world has to show, and no amount of reading, no collection of engravings or photographs, no tales of returned travellers can supply the lack of this positive knowledge. The passion for travel belongs to that scientific spirit of our time and people which is not content to take things at second hand, but will inquire and see for itself. The sneer is not just, that Americans travel in foreign lands, while they take no pains to see and know their own land. Large as their land is, and little as it has in most of its ways to show of historic or even of picturesque interest, Americans know it better than Englishmen know England, Frenchmen know France, or Italians know Italy. Five times as many American visitors annually go to the White Mountains as the English tourists who explore the Lake District and scale the heights of Skiddaw or Helvellyn. The rural Americans who visit New York are five times as numerous as the visitors in Paris from the French provinces. The going up and down on this continent, now as it is, large as its bounds are, and costly as is the transit, is incomparably greater than that of any other nation. We are a travelling people, more and more so with every year. We have one class of " commercial travellers," who are better dressed than the English " bagmen," and who really live upon the road, and rarely sleep under their own roofs. And we have a class, too, who travel half the year for the mere pleasure of voyaging with no special aim—a class which, if not large, is at any rate indefatigable. Nothing is more common than the wish, not merely of sentimental school-girls, but of grave mothers and fathers of families, to be always travelling.

The passion for travel may now be satisfied with very slight discomfort, and very moderate cost. Indeed, there are some who affirm that it is cheaper to live on the road, in the summer months, than to stay at home, and that health and economy coincide in their constant excursions. Travel has now become not merely a joy in memory, but a luxury in experience. The " Hotel Car," with its arrangements for eating and sleeping, gives all the comfort and beauty of a palace, with none of the plague of house-keeping. You can have your piano and your writing-desk, and your dining-table, and your couch to loll upon, while you are whirled like

lightning over the plains and among the hills. No more the plodding toil of pedestrian journeys, stiffening the joints, blistering the feet, with the added weight of knapsack upon the shoulders, and the vexation of soiled and, after a time, ragged garments. The walkers now are only that class of fanatics who will walk for wagers, fifty and a hundred miles a day—"walkists," they call themselves—professional gentlemen, as much as acrobats and billiard-players. The more excellent way of horseback journeying is fast losing favour, as it gives no convenience for change of raiment, and is so slow and expensive. Where a railway has been opened, the saddle surely is hung up, and left to mould.

Those very picturesque trains of emigrant wagons, which used to span the great plains of the West, have disappeared more utterly than the arches of the Roman aqueducts, and the emigrants and the cattle now go in cars, in the same trains, on the iron rail. The stage coach, with its ten inside passengers and its ten outside, has not yet quite disappeared, but there are parts of the land where it is less common than the gaudy chariot of the circus, and the "minstrels." There are a great many young men and women here who have never in their lives rode in an old-fashioned Concord coach, or felt its joltings and its wrenchings, as it swings around the curves, or is drawn painfully up the slopes. The canal boat has now ceased to be a barge for travel. The drowsy monotony of its quiet gliding has no longer any attraction, even in the hot summer days, and the loaded boats seem contemptible as the railway cars fly past them. There are dwellers in Central New York who imagine the charm of Holland and its "Treckahuyt," who yet never avail themselves of the Erie Canal, so near their homes, to test that quaint conveyance. The coasting schooner, too, and the great packet ships, so clean and so roomy, have lost their dignity, and are now only burdened with the cheaper and coarser articles of merchandise. We have boat races and yacht races, but neither boats nor yachts have any place in the conveniences of travel. Even steamboats are relatively declining in favour. On our Western rivers comparatively few persons choose the boat, when there is a chance to go by the cars. Except in the hot months of summer, there is a growing preference for journeys on land, with all their discomfort. And more and more persons are influenced by that contrast of situation, which is so tersely expressed in the description, "If you get smashed up on the railroad, why,

there you are; but if you are blown up on the steamboat, where are you?"

Since the railway has come practically to supersede other modes of travel, travelling has become possible to all, to busy men as much as to men of leisure. In a few weeks, one can now go over ground which in the last generation was the task of years. A College Professor goes from a Western State to observe an eclipse in Sicily, stays some sixty days, and then comes home to tell in a public lecture what he saw in half the countries of Europe, and leaves the impression that he saw pretty much all that is worth seeing. A six-month's journey carries one now rather leisurely across three continents and three oceans, and around the earth. The mountains and the sea are only a comfortable day's ride apart; and a Boston lawyer, taking an annual run through the Alps, puts a card on the door-way of his office, "Out of town; will return soon!" One can go almost anywhere by railway, into the country or into the city, into civilized or into savage life, to the crowded Fourth of July celebrations or to buffalo hunts. The sportsman finds a fine variety of sport in shooting at gazelles from the windows of a car rushing on at thirty miles an hour. Nay, the railway tunnels, sometimes miles in length, allow the weird fascination of exploring caverns, and visiting mines without discomfort, fatigue, or danger. By the railway the most delicate woman or the most portly citizen can climb mountains, without panting or terror. The improvement in travel which the railway has brought is absolute and unquestionable. It is only the most bigoted of eccentric men who would care to go back to the old methods, or use the old lumbering carriages and wains. Speed, comfort, economy, safety, ease of motion, room, change of position, punctuality, and how many more advantages, give railway travelling an easy superiority over all other modes.

And yet the grumblers have here their objections, numerous enough and plausible enough to make out a strong case. You talk of "safety;" yet does not every day's journal have its new chapter of railway accidents, of collisions, misplaced switches, cars off the track, broken axles, bridges falling in, drownings and burnings, and telescoping, with five or ten or twenty or possibly fifty lives lost? Is it not the presumption that every engineer and fireman and brakeman and baggage-master will come to an untimely end? Are not accident insurance policies sold at the very railway offices, warning the too credulous traveller what he ought to

expect? Is it not a special providence, on some lines of railway, if any passenger comes to his journey's end without bruise or mutilation? Who thinks of safety any more than of honesty, when mention is made of the Erie Railway? The stage-coaches had their accidents, and would sometimes upset; but did we ever hear of stage-coach "horrors," or "murders," which are entirely proper words to be joined to the word "railway?" The proportion of those who are killed or maimed to the whole number of those who travel is small, certainly; but the statistics which prove that fact have not established a perfect confidence where a hundred trains are running daily on a single track, with only the telegraph and the time-table to guide them. The danger of accident on any railway is always real and serious.

Then think of the bad air that most who travel on the railways are compelled to breathe! You have heat in winter, indeed, but at what expense—loaded with the carbon and the effluvia of forty or fifty bodies and pairs of lungs, not to speak of the inevitable dust shaken up from cushions, and sitting in even when doors and windows of the cars are closed. With all the improvements in railway cars, no satisfactory way has yet been found of supplying them in winter, or in the dry weather of summer, with clear, fresh air. If you open the windows, cold draughts come in or clouds of dust. If you close the windows, you suffocate. It is a choice between catarrh and asphyxia. And in addition to this bad tone in the air, think of the risk of contagious disease in sitting near and among so many persons, a mixed company! Who knows what plague may come to you from your neighbours? If you do not catch small-pox, or measles, you have at any rate to breathe in the odour of bad whisky, or tobacco, or onions, or of food from lunch-baskets. Think of the systematic and tolerated nuisances of the railway—the pea-nut merchants, distributing their crackling wares; the apple-dealers, the candy-dealers, the dealers in vegetable ivories, and yellow-covered novels, thrusting their trash into your hands in spite of your protest; the beggars with papers, blind men, and deaf women, and screaming Italian boys; think of snow on the track, banking up the train and making it necessary to dig out, with risk of starvation and freezing; and of fire, if some shock upsets the stove or throws down the kerosene lamp; or of pickpockets, who ply their vocation so easily in the press of the passage-ways; of the dangers of getting in and out of the car; of the hackmen with their whips, barricading every

station; these are the conveniences of railway travel!

But these are not all the objections; these are not the most important objections to railway travel. There is a jolt and jar which even the nicest adjustment of springs on the smoothest rail is not able to remove. The best-ordered railway can not get rid of the steady rumble and murmur which fills the ears of the traveller, and makes conversation a burden. The brain is in a state of perpetual concussion, from which there is no escape. The speed, too, so much glorified, is a snare and a trial, as it confuses the mind with too rapid impressions, and prevents one from seeing any thing in a satisfactory way. Where there is much variety in landscape, or where the number of objects is great, there is no chance of taking them in, much less of studying them, from the windows of a railway car. The visions are phantom visions. In this way of journeying, you pass through the land without really learning what it is, or bringing away pictures of it. Railway travel answers well enough for great barren plains, for deserts, for prairies, or for forests, where the scenery is monotonous, but it is not good for regions that are thickly peopled, or where there is the alternation of hill and valley, of grove and pasture, of field and village. It is too swift, and it avoids the very routes which would be most picturesque, going around or through what it should go over. The railways pass through the least interesting part of the towns and cities, where there is most grim and filth, and dull colour—among shanties and forges, and across back streets. How different from the old stage-coach, that came dashing up the broad avenue, after it had scaled the hills, and gave so to its company all the excitement of fine prospect and social cheer. In railway travel you get over the ground rapidly, but you lose half the profit of your journey by this very speed. You have not time to review and arrange impressions. It is the same vexation which comes to one who visits in a week a dozen galleries, each with its hundreds of pictures. He has no good idea of any, and the confusion of images spoils for him the grander works of the "Old Masters."

All these objections, nevertheless, all the grumbling, will not change the course of things, or restore the slow and antiquated methods of travel of the last generation. Whether we like it or not, we must adapt ourselves to railway travel, must meet its annoyances, must take the risk of its accidents, and must make the best of what we can not help. Trains will

continue to run on the Erie and the New York Central railways, and at thirty or forty miles in the hour, in spite of the slaughter and the horrors, and the confused ideas of sluggish brains. We must adapt ourselves to railway travel, such as it is, with its watered stock, its Celtic switchmen, its rapacious purveyors, and its reckless managers. We must pay exorbitant rates for its indigestible provender, and must submit to be drowned or roasted, if the fates so order. Unless we will stagnate at home, and dry up or rust out in the routine of village life, we must make use of these fatal railways. They have the right of eminent domain; and the very capitalist who vows that he will not travel by them, has to sell his land to them, and to hear the villainous whistle, screaming ten times in the day as the hateful train shoots through his garden, and sends its dust into his chambers. A man who in our time undertakes to fight with the railways, is in worse plight than Don Quixote in his fight with the windmills. Much as we may complain, there is no better way; in fact, there is practically no other way. To travel from Boston to Saratoga now with a "coach and four," is next to impracticable, for the inns along the roadway are mostly shut, and there is no longer "entertainment for man and beast." One who would journey in this way in the most civilized part of our land must virtually do as travellers do in the Arabian desert, and take his supplies along with him, must have a plethoric canteen suspended to his graceful chariot, and carry his bags of grain on the backs of his horses. Travelling in that way now would make one a "gazing stock" as much as a costume of the last century, the knee-breeches, the cocked hat, the ponderous queue, and the brass buttons.

In view of these facts, it may not be out of place to give some rules for comfortable railway travelling. And the first of these rules is to be *punctual*. It is never safe to count upon delays, though they so often occur. Provoking as it is to wait half an hour or an hour in some dreary station, it is more provoking to reach the station half a minute too late, and see the train gently gliding away. One may be late anywhere else with more reason. It is not every purse that is long enough, or every soul that is resolute enough to hire a "special train," as some noted lecturers have done, and so fulfil a broken engagement. There is no need of being half an hour too early, and it is a pitiable weakness to hurry breakfast on a cold winter morning, when there is a good hour to spare. Yet it is a still more melancholy weakness,

which brings one, red in the face and out of breath, to jump upon the platform day after day when the train is in motion, at imminent risk of being thrown under the wheels. A railway station is an excellent position for the study of human folly. It is a good rule to be at the station long enough before the train leaves to make wise choice of a place in it, if it is already there, or at any rate, to get the mind composed and the nerves quieted.

2. In the choice of a seat, *get one as nearly as possible in the middle of the car*. Perhaps a seat nearer to the door may be safer in case of accident, and one may find easier escape. But that advantage is more than met by smoother motion, and the more comfortable air in the central part of the car. There are fewer cold draughts in that part, and in most cars the red-hot stove is less a nuisance there. A place over the wheels is not good for the brain; a prudent man will avoid it, if he can. Somebody must sit there, of course. Let it be the penalty which the late comers pay. The material of the seat is of much less importance in long railway journeys than the place of the seat. A velvet arm-chair, with the wind blowing upon it, or the jerk of the wheel vibrating in it, is not so safe and not so comfortable as a hard board bench in a better place. Do not sit near to the stove, or over the wheels.

3. Then, when there are several cars in the train, *choose a place in one of the middle cars*. No place in a train is wholly safe, and it has no more been decided which is the safest place in a railway train than where is the best place on the body to have a boil. Other things being equal, the middle car is safer than the front or rear car, in case of collision, and it has certainly an easier and more steady motion. It is a mistaken idea that the rear car is the least exposed. There are trains that follow as well as trains that encounter, and some of the worst railway accidents on record have come from these following trains. Avoid, at any rate, the temptation to use the baggage-car or the emigrant-car, because in these "smoking" is permitted. The luxury of a cigar is poorly purchased at the risk of fractured limbs, or in the pollution of foul air.

4. And we are disposed to urge, as a fourth rule, the propriety of *avoiding night travel in railway cars*. How absurd! it will perhaps be said. Is this not one of the grand improvements of this method of travel, that the nights can be used, and that you can sleep as comfortably as in your bed at home? Is it not great gain to get over the ground while you are

asleep, and save the weariness of the long day stretch? Nevertheless, we say, Don't travel by night, unless you are in a hurry to meet some engagement, to see a dying friend, or to reach your lecture-hall, when the trains have been detained. A bagman or a "bummer," who must have all his day-time for traffic, may be excused for travelling by night. He has no purpose of spiritual improvement or physical delight. But one who is travelling for health or pleasure loses much in the wear and tear of nerve which night-travel involves. The thin light, flickering and faint, is ruinous to the eyes, and the sleep which is snatched and broken, is not refreshing. Even the nice bed and the clean sheets of a Pullman palace-car are no guarantee for genuine rest; there is as much wakefulness, as much fitful dreaming, as much fear of nocturnal prowlers, and much more danger in case of accident, in these palace-cars, than in the more open cars, where they tumble and toss upon the seats, but are ready to move when the shock comes. Not a few persons, who thought sleeping-cars a wonderful invention a few years ago, now religiously avoid them, and prefer to watch in the other coaches, rather than be hived in the close cells and the hot air of those splendid cages.

5. To this we add the counsel, *not to eat in the cars*. Convenient as the custom may be, it is not quite clean. One can not drop crumbs, apple skins, and nutshells upon the car floor without annoying some of his neighbors. The odour of food clings to a car, even when it is open to currents of air. "Ten minutes for dinner," at a railway restaurant do not, of course, hold out a hope of a Christian meal. Yet where reasonable time is given, it is better to go for food in the place where it belongs. We may doubt, too, if it is altogether healthy to eat when the body is flying through the air, any more than when one is walking. There is a kind of bodily exercise in the motion of a railway car, less violent perhaps than that of rowing or horseback riding, but still quite as real. Who thinks of eating on horseback? The organ-grinder stops his grinding when he takes his dinner, though he still has one hand free.

6. Dr. Holmes, in one of his books, says that the model fellow traveller in a railway car is one who sits by you with his mouth shut, and asks no questions. May we not infer from this remark, if it is as wise as most of the Doctor's remarks, that much conversation in railway travel is not good, and should be avoided? A dead si-

lence is embarrassing, but a perpetual stream of talk when there is this background of jar and rumble, making it an effort to listen, is fearfully wearisome. It tries not only the ears of the hearer, but it tries the voice of the speaker. It is not well to talk much in railway cars, when talking is felt to be an effort, and the voice has to be strained. Moreover, we should remember that loud talking will be overheard by those to whom it is not addressed. There is no greater nuisance in a railway car than a loud declaimer, who makes his affairs or his fancies public property.

7. Shall we read in the cars? Judicious oculists say that it is not safe. But what is a lone man to do, if he may not eat or talk? Must he spend all his time in thinking, or in looking out of the window, or in dozing? Some reading, certainly, must be allowed; and the profits of the book business on the train show the warning of the oculists is not very piously heeded. The best advice is, *not to read very much or very steadily in railway cars*, not to read any thing that requires close attention or close study, or that is printed in fine print. Newspapers and magazine stories are about as much as the brain ought to be tried with in this journeying. If one studies, it should be in the guide book rather than in Herbert Spencer. Mathematical problems and theological discussions are not to be handled in railway journeys, and a wise tourist will not choose the game of chess for his recreation when he is in an express train.

8. Another rule of railway travel, different from those thus far given, which are all in a sense sanitary, is to be *chary of making new acquaintances*. One of the pleasant things in the old stage-coach era was the agreeable friendships that sprung up in those expeditions, when men and women were brought so close together, and compelled to know one another. The company in railway cars is too miscellaneous to make that intimacy desirable. It is not safe to make a confidant of the man who is on the seat with you, or to expose to him your own weak points.

9. And a final advice is, covering a multitude of details, and very comprehensive—*mind the rules of the road*. Don't stand upon the platforms, or jump from them when the cars are in motion. Get your baggage properly checked. Don't open windows which were not meant to be opened at the season. Consider the rights of your fellow travellers and their comfort, and don't act as if you were entitled to special privilege. We add nothing more.

The Neglected Rich.

BY F. B. PERKINS.

ABUNDANCE of talk has been talked over the neglected poor. It is time that something was done for the neglected rich.

Rich people are human as well as poor people, they have their rights, and in a free country they ought to have a fair chance; an opportunity to start respectably in life, and to go respectably through it. But it is a melancholy fact that the organization of society in this country is such, that these just and equal privileges are—not exactly denied, but—not considered nor provided for rich people.

Don't you see yet what I mean? *There is no education with a view to manage wealth*—no education for the rich.

Thoughtless people may laugh here, or sniff, and say it's all talk. But not at all. I can give the names of three men of large wealth in one not very large city who have died within the past few years, leaving their estates protected from their children; that is, in the hands of trustees for the benefit of the children. Unhappy, neglected rich children! They had not been educated with a view to manage riches; and they were unfit to be trusted with riches.

Is that all talk? The practice of leaving large estates in precisely this way—beyond the control of the owners, because the owners are not fit to be trusted with wealth, is growing more common. It is prudent, no doubt, under the circumstances, but it is not a natural nor healthful arrangement. It is an attempt to make up for one bad state of things by establishing another; just as doctors give the poison of belladonna to get rid of the virus of scarlet fever.

Many writers have commented on the fact that here in America, great accumulations of wealth in individual hands are almost always dispersed again in the hands of the next generation, or the next but one; and this is usually reckoned as an advantage of our particular social organization.

Partly it is an advantage, and partly not. If wealth can only be managed improperly, it is good to have it scattered as soon as possible. But this theory of scattering takes it for granted that wealth will go into bad hands.

Wealth in good hands is not an evil, it is a good. Wealth well-managed is the one most absolute material necessity of civilization.

Without it, no cheap clothes, no abundant household furniture, no carpets, no books, no great newspapers, no steamboats, no railroads—in short, nothing but pervading poverty.

I really believe an institution for rich children—Rich Children's Aid Society—would be a good thing. There are many institutions for poor children. Their special dangers and weaknesses are provided for. If there is any truth in Christ's teachings, the temptations and dangers of riches are greatly more to be provided against than those of poverty. Why should not the rich children be protected against their peculiar dangers, I should like to know?

It need not be supposed that no such training has ever been provided. The thing has been done over and over, according to the best lights of those who did it. Indeed, in England, the whole University system is an effort in this direction. It is greatly crippled and cankered by the chief English social fallacy of "upper classes" and their privileges. Its theory is that England belongs to the "nobility and gentry;" that the "gentlemen" should govern it. This is an error which I need not stop to discuss; but at least there is sense in the idea that goes with it, that a special education is necessary for those who are to exert these special powers. Now in England an enormous proportion of wealth is in the hands of the "gentlemen;" so that in fact, although only in an approximating and imperfect way, a rich Englishman is provided with an education which prepares him to manage his wealth and his position. In Germany, where aristocratic notions are stronger than even in England, there have been—though I believe there are not now—special separate schools, exclusively on purpose for princes and nobles, and into which plebeians might not come. This plan is still more infested with evil than the English one, but it contains the same seed of truth.

The education I suggest for the neglected rich is not one that assumes the idea of privilege, but of danger, of responsibility, of weakness. It should in a particular manner inculcate ideas of duty; of self-control; of humility; of justice; of kindness; of public spirit. It should be distinctively a noble education; not an education to maintain the pride of noblemen, but exactly the opposite; to prevent pride, and thus make noble men. It should be longer, harder, more

thorough, than other educations. Its graduates ought to possess broader views, higher aspirations, finer appreciations of the true, the beautiful, and the good, than graduates less severely trained. It might reasonably be expected that such a class of graduates would afford many

high-minded and cultured gentlemen; and would infuse into our politics, into our greater industrial enterprises, into our science, invention, literature and arts, a largeness, an elevation, and a purity, in which they are too often deficient.

Let Her Speak!

[BY MRS. M. A. KIDDER.]

SHE has something to say; you may tell it
 By the flush on her beautiful cheek.
 She has something to say to the people,
 Let her speak, if she will, let her speak!
 Let her speak for the good of the nation,
 Let her help the oppressed and the weak;
 Let her sweet voice be heard through creation,
 Let her speak for the truth, let her speak!

As a mother may speak to her children,
 Her warm heart with love overflown,
 To her daughters and sons by adoption,
 Let her speak, as she would to her own.
 If you have a good cause, and would win it;
 Or if true consolation you seek,
 Let her speak, for her heart will be in it;
 Let her speak for the truth, let her speak!

God has never made woman with talents;
 With genius and beauty combined,
 To be fettered by folly and fashion;
 Aye, a cross betwixt matter and mind.
 She has something to say to the people;
 To the sad, the oppressed, and the weak.
 She has something to say to the people;
 Let her speak for the truth, let her speak!

SOME hands have art to move the heart,
 By waking music's sweet appeal;
 Some borrow dies from perfect skies,
 And, through the canvas, make us feel;
 Some make the dress fair forms caress,
 To win the heart and turn the head;
 For me, more rare beyond compare,
 Are the bonny hands that make good bread!

Generative Expenditure and Longevity.

BY H. RAY LANKESTER, B. A., OXFORD.

IT is apparent that the longest-lived animals and trees are those of high development, and not only generally, but in comparing the members of a class or order this is found to be true. Thus we see the great trees, exhibiting no doubt the greatest bulk and greatest differentiation among plants, as having the longest life. The Vertebrata, which are the highest in evolution of animals, are, as a whole, the longest lived; for the Mollusca and Crustacea and Echinodermata, though, as stated in the list, they are not known to have a definite limit of life, yet certainly do not, on the whole, exhibit any thing like so great a potential longevity as the Vertebrata. Again, among the Vertebrata, the longest lived are found in the Mammalia; and the whale and the elephant, living respectively three hundred and one hundred and fifty years, are the largest, and, in this special characteristic, as highly evolved as any of the class. Then, side by side, we see the whale longer lived than the elephant on account of its greater bulk; man longer lived than the chimpanzee, being larger and more highly differentiated; the ox longer lived than the sheep and goat; the lion than the ox, being although not bulkier yet of higher development. So the small Rodents and Insectivora have short lives; the mouse being said to live a shorter time than larger allied forms. It would be interesting to know as to the longevity of Marsupials; whether their lower evolution tells strongly on their longevity, or whether bulk affects it most. The large Kangaroo, were longevity regulated by bulk alone, should live longer than the sheep. The Reptiles present *inter se* the same relations; the crocodiles and chelonians, which are certainly those of greatest individuation, being longest lived. So too the Fishes, as far as facts go, the pike being a highly evolved fish. The sharks may be guessed from their great size to have very long lives, which confirms the rule as to high development, though of course it can not as to bulk. That bulk and development increase together is well ascertained from general principles. The sharks of the later tertiary period are calculated from the size of their teeth to have measured between eighty and ninety feet in length, and may have had a proportionate longevity. Speculation might lead one to attribute enormous longevity to the gigantic extinct mesozoic reptiles.

Among Mollusca, the highest in evolution are the highest in longevity, if we may judge by the size and rate of growth of some Cephalopods, both recent and extinct, as compared with Conchifers and Brachiopods. The Insect *inter se* present facts supporting the truth of the proposition as to high evolution: the Coleoptera and Orthoptera, undoubtedly from the carnivorous habits (in many cases) and generally dominant character, the most highly evolved, are the longest lived, according to observation, e. g. *Scarabeus* and *Mantis*.

Among Birds, the most striking case is seen in the exceeding longevity, which is well ascertained, of parrots. They are undoubtedly the very highest of birds in development, and they live probably the longest. The facts as to age do not however relate to their normal potential longevity, we have to guess that from the experiment in abnormal conditions.

Next, as to generative expenditure. Since this generally and clearly increases with diminished evolution, it is not difficult to establish the contrast between it and high longevity, as a general rule. The Protozoa and Protophyta are exceedingly prolific, an Infusorian being calculated to produce two hundred and sixty-eight millions in the course of a single month (*Paramecium*); another one hundred and seventy billions in four days, and their duration of life is correspondingly of the shortest. Insects are exceedingly prolific, and hence, in spite of their high evolution, very short-lived. Many insects deposit three hundred thousand ova, but, what is a more important item of consideration, they deposit an enormous bulk relatively to their living matter. Compare the not far distant but inferior Annelids, and they are seen to be longer lived, for though in most cases possessing large genital organs, they do not deposit their ova or sperm so early or so rapidly as the insects. The Vertebrata are by no means prolific (except fish), and at the same time are longer-lived than Invertebrata.

Fish are long-lived, in spite of considerable generative expenditure,* the explanation lying

* The bulk of the ova and sperm in fish is not so large as the number of the ova lead one to think; and moreover, as a rule, they give no parental attention, which is a most important item of generative expenditure. In those fishes which do, e. g., Pipe-fish, Hippocampus, and

in the diminished personal expenditure involved in their aquatic life. This, too, affects greatly the case of annelids just quoted. Among birds it is easy to point out that smaller broods go with a greater longevity: thus the eagle has but one or two eggs, the common owl four or five; finches two broods of five in a season, and the wrens and tits eight to fifteen; and these, as appears from our list above, stand in the same order as to longevity. It is very difficult indeed to find particular cases in which the direct action of generative expenditure on longevity is apparent, for it affects other quantities before longevity, or its action is counteracted by fluctuations in these quantities, as, for example, in personal expenditure and degree of evolution. One ought to compare organisms which are alike in these two last quantities. In trees, we may take the pear, apple, and such fruit trees, and we find that they are excessive in their reproductive expenditure, and short-lived as compared with other trees which agree (as do all vegetables) in the absence of personal expenditure, and are of equivalent individuation. In animals we may best compare experimental cases; thus we find that animals used for breeding, and made to breed early, are less long-lived than those which are not so used. There are, besides, two important cases to compare, viz., mules which are born incapable of reproducing, and animals which have been operated upon. With regard to the Mule, Bacon states that it lives longer than either the horse or the ass, which confirms the hypothesis that generative expenditure antagonizes longevity. But as to the results of operations, it appears that, as in cases of forced abstinence, a disturbing element is introduced by the interference with the proper functions and nutrition of the animal. The principle of Treviranus, "that every organ is as an excreting gland to the rest of the body" must be remembered, and we can comprehend that by the removal of generative glands no advantage as to longevity would accrue to the organism, but perhaps great injury, while the abeyance of normal functions will equally not prevent that nutrition of the organs and their growth, which is a great part of the tax of generative expenditure. At the same time, both castrated organ-

Arius of the Amazons, the bulk and number of the ova is immensely reduced.

This item of parental attention is what in the case of man and other animals tends much to balance the male and female generative expenditure, for the male feeds both mother and young for a considerable time by his exertion; hence the female's expenditure of substance is in some degree balanced

isms, and those restrained from the sexual act, gain in the possible absence of nervous excitement, which has "a relatively enormous costliness," and by not losing the simple weight of the emitted generative product. It does not appear from facts, that castrated animals are longer-lived than those normal, neither among men nor lower animals, nor that celibates, male or female, among either men* or lower animals, have a large if any advantage.

Passing on to personal expenditure, we find more numerous facts in the list to support our deductions. Aquatic animals, generally, have less personal expenditure than terrestrial animals; they are supported in the water, the temperature fluctuates little, their food is abundant, for waters "team with life" truly more than the atmosphere. Terrestrial animals, while supporting themselves mostly on the ground, live in the air, and in very few cases is their food to be found abundantly in this medium, and accordingly their expenditure in getting food is greater. Thus among Vertebrata, the whale is long-lived, the crocodiles and chelonians are long-lived, the salamandroids and the fish. It does not appear certain that the Batrachia (frogs and toads) are shorter-lived than the salamandroids; their terrestrial habits involve greater expenditure, but their very much higher individuation may counterbalance this. Among Invertebrata, the Mollusca are long-lived; the Pulmonata less so than the branchiate Gasteropods. Paludina and Lymnaeus living in the same pond differ thus in age,† while no land Mollusc is as large (and therefore probably from what we have seen as long-lived) as many hundreds of aquatic (marine) species.

The aquatic Arthropods (Crustacea), excluding the minuter forms, are most broadly contrasted with the terrestrial Insects, Myriapods, and Arachnids, in respect of length of life, as we have before mentioned, and set forth in the list. Descending lower, we find no terrestrial groups to compare.

Reptiles living in hot countries, and feeding

* It is exceedingly difficult to make estimation as to male celibates; the unmarried have a considerably higher death-rate at ages below fifty among the males than the married, but there are not statistics to show that of the numbers surviving there is a less expectation of life than among the married, or widowers. It is impossible to be assured of the strict abstinence of any group of men. Among women the oldest are widows, but the relative ages of marriage of males and females, and the numbers of married and unmarried affect these numbers vastly, and their influence can not yet be eliminated.

† As far as the writer's observations go, Lymnaeus lives four years, and Paludina seven or eight.

on large masses of food at intervals, have small expenditure and live long. The higher reptiles are the most sluggish and inert of any animals in proportion to their degree of development; and hence, their expenditure being small and their development high, we should expect them to exhibit great longevity, which they do. A very instructive contrast is afforded by birds and reptiles, which are so closely allied in structure. The active, expending birds are short-lived as compared with such reptiles as the tortoise and crocodile.

Echinoderms, being exceedingly sluggish, living on the most easily obtainable food, in many cases, viz., the organic matter diffused in sand, live longer than would be expected from their comparatively low place in the scale of life. Actinia, which is also almost like a vegetable as to absence of personal expenditure, as are other sedentary coelenterates, owes its great longevity to a relatively high evolution, in respect of *integration*. It buds never (or rarely), and breeds sexually but little.

The parasitic worms and crustacea might be expected to have a great longevity from the total absence of personal expenditure; but here, as in many plants, there is enormous generative expenditure, which shortens life, the small percentage of those born which ever get into the happy conditions of a stomach or gill, being the reason for this great generative outlay. Most of these forms die on reproduction. *Tania* does not die at once, because of its tertiary aggregation; that is to say—it is separated into a number of joints, which, one by one, come to maturity and die, while new joints continue to grow from the head.

These are some of the most striking inductive verifications which the collected statements furnish; others are to be found by a further examination of the list.

FOOLS vs. IMPS OF MISCHIEF.—A certain old teacher used to remark that he would rather have "ten devils in a class than one fool." He could make something of the imps of mischief, not by suppressing their jollity, but by turning it into right channels. The fool is not troublesome but hopeless; he lacks energy of mind. A friend of ours, an experienced teacher, says: "The hardest working, most brilliant and successful student I ever had the pleasure of teaching, was a young man whom the president of the college called a monkey, too full of frolic to accomplish anything useful. He was too frolicsome to do any thing

soberly, more especially if gravity was insisted on as a duty. But when his overflowing humor was allowed to brighten his work, he was the most persistent student in the institution; he made fun of labor that sober-sided plodders broke their hearts and deranged their stomachs over."—*College Courier*.

A NEW THOUGHT FOR EDUCATORS.—In one of our large Western cities, I came a few weeks ago upon a unique school, illustrative of the desire to do something that is becoming so distinguishing a characteristic of the women of the period. Three wealthy and accomplished women, leaders in society, came to the conclusion that they could give their children better instruction than they were receiving at the schools, and determined to try the experiment. Living in the same block, the matter was easily arranged. Reception-room in house no one became a school-room, and its mistress a teacher from 9 till half-past 10, of number two from half-past 10 till 12, of number three from 2 till half-past 3 o'clock. Each taught those branches in which she was a proficient, the interest of the pupils was unflagging, and their progress wonderful. The experiment at the time of my visit was nearly six months old, and no signs of waning enthusiasm had manifested themselves on the part of teachers or pupils; it was [in every sense of the word a success.—*Anonymous*.

A CURE FOR THE BLUES.—A paragraphist says in one of the medical papers that "Laughter and music will cure the blues." Now laughter is good, and music is good. And we do not doubt that they have a good effect on those who are depressed in spirit, but how is a man going to laugh when he don't feel like it, and, it is not always easy to get a dose of inspiring music. A still better prescription is to seek the society and moral support of people who are not blue. When a clock has run down, it stops. It can not start itself, somebody must wind it, and touch gently the pendulum till it swings freely in its accustomed track. So when hope has departed from the soul, and all looks dark and discouraging, the touch of a strong, healthy nature cheers and invigorates, and starts into action a faculty that has run down and stopped. If you are blue, then go to one who is not blue, and let him apply the sparks of his own life to your despondent nature.—*Exchange*.

STUDIES IN HYGIENE.

RECIPES TO ENHANCE PERSONAL BEAUTY.

How to be beautiful when old ?

I can tell you, maiden fair—

Not by lotions, dyes, and pigments,

Not by washes for your hair.

While you're young be pure and gentle,

Keep your passions well controlled,

Walk, work, and do your duty,

You'll be handsome when you're old.

Some white locks are fair as golden,

Gray as lovely as the brown,

And the smile of age more pleasant

Than a youthful beauty's frown.

'Tis the soul that shapes the features,

Fires the eye, attunes the voice ;

Sweet sixteen, be these your maxims,

When you're sixty you'll rejoice.

HYGIENE FOR BABES.—The infatuation of those mothers who persist in substituting corn-flour and nursery-biscuits for the milk intended by Nature for very young babies, received the other day a severe practical rebuke. Dr. Dowd, giving evidence at an inquest held upon the body of an infant, aged ten weeks, said that "the poor little thing was brought to me in a dying state; the body was very much emaciated—in fact, only skin and bones—and, although nearly three months old, did not weigh more than five pounds. The post-mortem examination showed that all the organs were healthy, and the stomach contained farinaceous food. The cause of death was wasting—in fact, starvation from want of milk, and I don't approve of corn-flour being given to young children in such a case." Dr. Lankester, in summing up, said "milk, and not corn-flour, is the proper food for infants; failing breast-milk, the best substitute is new milk, or the condensed Swiss milk, which has all the properties of mother's milk, and it will likewise keep any length of time. To my own knowledge, children have been fed on it for months, with the best possible results." Now this Swiss milk is convenient, and is within the reach of every one, and should be found in every nursery.—*English paper.*

The Swiss milk spoken of above is not to be

had in this country, but in most of the large cities condensed milk can be procured, and is preferable to most of the milk sold in the market.

FAMILY HYGIENE.—A good wife is the greatest earthly blessing. A man is what his wife makes him. It is the mother who molds the character and destiny of the child. Make marriage a matter of moral judgment. Marry in your own religion. Marry into a different blooded temperament from your own. Marry into a family which you have long known. Never talk of one another, either alone or in company. Never both manifest anger at once. Never speak loud to one another, unless the house is on fire. Never reflect upon a past action, which was done with a good motive, and with the best judgment at the time. Let each one strive to do right, and above all, let each one try to keep cheerful.—*Exchange.*

The secret of family happiness is personal happiness of the members, and this depends mainly on good health. Unhappy people generally have something wrong in their stomach or perhaps they don't sleep enough. A person who has been out late at night, dissipating away his or her health, is quite sure to treat every body badly next day, and think them bad, when the fault is nearer home.

POTATOES.—Potatoes, as usually cooked, are probably the most objectionable article of food which can be presented to a weak digestion. The starch granules are but half ruptured, and are held together by cellular tissue, so that they are reduced by mastication only into small pellets, which require long soaking into gastric juice before they can be broken up sufficiently for solution.—*Chambers on Indigestion.*

If potatoes are fresh, and of good quality, and well masticated, they will not be found difficult of digestion by those who take active exercise in the open air. It is however very true that potatoes, as usually found in large cities, are more or less injured and unwholesome. They do not

bear without injury, transportation, exposure to light, and change of temperature.

HYGIENE FOR SEWING-MACHINE OPERATORS.—Dr. E. Decaisne has reported to the French Academy of Medicine, the result of his observation upon 661 operators upon sewing-machines.

1. The effect of working a sewing-machine is in no wise different from that produced by all excessive muscular effort (*i. e.*, only injurious when excessive).

2. The sewing-machine can not be the cause of disturbance of the digestive apparatus, for sixteen out of twenty of all kinds of artisans are troubled in the same way.

3. Affections of the respiratory apparatus are no more numerous in women who work with sewing-machines than with any other laborers.

4. As for the effect of the noise made by the machine, or the jar upon the nervous system, the writer thinks it of no moment, as the operators soon get accustomed to it, and make no complaint. (Do injurious agents, to whose influence we become accustomed, cease to be injurious?)

5. Without saying positively that the use of the sewing-machine has no exciting influence in producing disease, our author affirms that the observations published in this regard, and the generalizations drawn from them, are without value. The cause of these disturbances are to be sought in the moral or physical peculiarities of the operators.

6. If proved to be injurious, other power can be used in factories.

7. The machines with isochronous pedals are to be preferred to alternating.

8. The writer concludes that when women use sewing-machines within reasonable limits, they are no more injurious than sewing with the needle. In twenty-eight women, between eighteen and forty years, working three or four hours a day, he could discover no ill defects attributable to their labor.

EARLY RISING.—J. C. B. asks if children should be made to rise early in the morning. We answer, Yes, if they are sent to bed early at night, but in no case is it wise to wake them up. One of the very worst economics of time is that filched from necessary sleep. The wholesale but blind commendation of early rising is as mischievous in practice as it is errant in theory. Early rising is a crime against the noblest part

of our physical nature, unless preceded by an early retiring. We caution parents, particularly, not to allow their children to be waked up in the morning. Let Nature wake them up; she will not do it prematurely. Take care that they go to bed at an early hour—let it be earlier and earlier, until it is found that they wake up themselves in full time to dress for breakfast.

QUALITIES FOR A NURSE.—She should be able to read writing and to write fit for reading. She ought also, to have all her five senses in a healthy, active condition—sight, hearing, feeling, smell, taste. Sight, that she may be able to read directions, or read aloud to the patient, and watch the change of countenance. A quick-sighted nurse will not need to wait till the sufferer has asked for any thing in words. She will, from the motion of an eye, or the lips, or a finger, see in a moment what is wanted. Hearing, that she may catch the faintest whisper, and not oblige a weak patient to exert the voice, and to repeat every request. Feeling, that she may detect any change in heat or dryness in the skin of the patient, and not to use any application which will either scald with heat, or cause a chill with cold. Smell, that she may detect the least impurity in the atmosphere of the room. Taste, that she may not offer food unfit to be used, or good in itself, but cooked in such a way as to be disgusting to the patient. Now, if she possesses these qualities, she will very soon, with a little instruction, be able to do the patient more good than the Doctor can.

HYGIENE FOR THE VOICE.—The first thing to which the teacher should give attention, is quality of tone produced by the child. The "baby-tone"—with its accompanying "baby-talk"—which has perhaps been petted and cultivated at home, and called "cunning" at school, must give place to a smooth, round, pleasant quality. The harsh screaming which boys in particular so often adopt, must never be allowed. They can easily be led to distinguish between noise and music, and can at least be educated to prefer the latter. There is as much difference between the noisy quality, often heard in school-rooms, and a true musical tone, as between the crash of broken crockery and the ring of a silver bell.

The principal points which require attention in the training of a child's singing-voice are:

1. **QUALITY OF TONE.**—It must be clear, melodious, promptly started, and evenly sustained.

2. **POWER OF TONE.**—Not strained on the one hand, nor so feeble as to be imperfect or husky

8. **LENGTH OF EXERCISE.**—The voice must not be fatigued. The singing lesson should only be continued so long as the child enjoys it; never till he is physically or mentally weary.

A BRIEF NIGHT'S REST.—

Last night I weighed, quite wearied out
The question that perplexes still;
And that sad spirit we call doubt
Made the good nought beside the ill.

This morning, when with rested mind
I try again the self-same theme,
The whole is altered, and I find
The balance turned, the good supreme.

A little sleep, a brief night's rest,
Has changed the look of all that is!
Sure, any creed I hold at best
Needs humble holding after this.

HASTE AND HEALTH.—It is not at all wholesome to be in a hurry. Locomotives have been reported to have moved a mile in a minute for short distances. But locomotives have often come to grief by such great rapidity. Multitudes in their haste to get rich are ruined every year. The men who do things maturely, slowly, deliberately, are the men who oftenest succeed in life. People who are habitually in a hurry generally have to do things twice over. The tortoise beat the hare at last. Slow men seldom knock their brains out against a post. Foot-races are injurious to health, as are all forms of competitive exercises; steady labor in the field is the best gymnasium in the world. Either labor or exercise carried to exhaustion, or prostration, or even to great tiredness, expressed by "fagged out," always does more harm than the previous exercise has done good. All running up-stairs, running to catch up with a vehicle or ferryboat, are extremely injurious to every age, and sex, and condition of life. It ought to be the most pressing necessity which should induce a person over fifty to run twenty yards. Those live longest who are deliberate, whose actions are measured, who never embark in any enterprise without "sleeping over it," and who perform all the every-day acts of life with calmness. Quakers are a proverbially calm, quiet people, and Quakers are a thrifty folk, the world over.—*Dr. Hall.*

LAZINESS AND LONG LIFE.—The lazy groan most over their "arduous duties;" while earnest workers talk little about the exhausting labors of their profession. Of all creatures, the sloth would seem to be the most wearied and

worn. "He that is slothful in his work is brother to him that is a great waster"—first of all of health. Said Dr. Humphrey, for twenty-two years the President of Amherst College, and who reached the age of eighty-two: "I have yet to see the man who died from the effects of study." Kant, an indefatigable student in the most profound themes of metaphysics, and leader of a new school in philosophy, lived beyond the limits of three score and ten. As the result of his long experience and wide observation, he was wont to say: "Intellectual pursuits tend to prolong life." He placed great reliance on the power of *cheerfulness* and *will* in resisting disease. "Be of good cheer," is as wise a prescription for the health of the body as of the soul.—*B. G. N.*

MENTAL HYGIENE, AND TOBACCO.—

What is no longer doubtful is the part taken by tobacco in the progressive development of mental maladies, and more especially in the etiology of that form of alienation so vaguely denominated general or progressive paralysis, and which for a certain number of years has increased so as to encumber in every direction the *maisons de sante* and lunatic asylums. MM. Guislain and Hagon were the first to point out the double influence of tobacco and spirituous liquors on the almost unheard of development of this disease, and the following statistics seem to justify the opinion of the Belgian physicians:

From 1818 to 1830, the production of tobacco being 25,000,000 kilos, there were 8,000 insane.

In 1838, the same product being 30,000,000 kilos, there were 10,000 insane.

In 1842, the same product being 80,000,000 kilos, there were 15,000 insane.

In 1852, the same product being 120,000,000 kilos, there were 22,000 insane.

In 1862, the same product being 180,000,000 kilos, there were 44,000 insane.—*Prof. Jolly.*

Many persons think that a smoke after a meal promotes digestion, but Dr. Morris suggests that, if people whose digestion is not good, will eat slowly and masticate their food well, and not rush off to work at once after a meal, they will not need this aid, indeed he thinks the aid to digestion attributed to the smoke comes after all from the rest and quiet, and not from the tobacco in any wise.

THINGS THAT HURT THE TEETH.—

Among the things hurtful to the teeth, we notice the bad habit of using them for purposes for

which they were never intended. Persons who with their teeth crack nuts, draw corks and nails, lit heavy weights, and bite thread, a thing especially to caution ladies against, only expose to premature decay, organs indispensable to nutrition and beauty. Smoking is also to be deprecated, for it corrodes the teeth, and the sudden change many times in inhaling cold air, causes an inflammatory action of the mucous membrane of the mouth. The continued use of pipes and cigar-holders, being made of hard substances, wear away the teeth. Look at an old man who smokes a clay pipe, for example, and you will find the lateral incisor and cuspid worn to such a shape, that they exactly fit the stem of his pipe. There is a habit which the ladies have of putting pins and needles in their mouths, and often carrying them there for a long time. This is no little matter, for the contact of these hard bodies, pressed with more or less force will wear away the enamel, and sometimes induce caries of the whole tooth.—*Dr. Ambler.*

WAISTS.—The waists with bands over the shoulders and buttons for the attachment of the skirts which some ladies wear, are a very useful means of support, and when properly made and fitted to the form they do much toward taking the weight of the skirts off the waist, and their use is to be strongly recommended; a single waist can be made so as to support all the skirts but that of the dress, and this should be so loose as to be supported by its own waist. Of course, if the under-waist is made so tight at the bottom as to closely compress the abdomen, it will be quite useless for the purpose designed. Woman's taste and ingenuity can devise plans for making them so neatly that they will add to, rather than detract from, the appearance of the form. These waists were much more generally worn formerly than now, and it is a pity that they were ever discarded, as their continued use would have prevented much injury to the health of women.—*Dr. Robert White.*

THE THERMOMETER IN DISEASE.—The British Medical Journal hopes "it will not be long before every intelligent mother of a family is familiar with the use of the thermometer for the discovery of disease. In many respects, it is far more reliable than the tongue or the pulse. As a means of ascertaining when it is desirable to consult a doctor, and when advice may be deferred with safety, it would be invaluable. By its aid the difference between insignificant skin-rashes, which will disappear in a day or

two, and those which imply a constitutional fever, may usually be satisfactorily determined. Under many circumstances, the early discovery that a child was sickening for scarlatina or measles might be of great importance."

CONSUMPTION OF OXYGEN.—An adult person consumes between one and two pounds of oxygen daily. If we reckon the population of the world at a billion, and allow one pound per day to each person, and calculate approximately the amounts consumed in other ways, we may take the daily consumption of this element to be about as follows:

Man.	1,000,000,000 lbs.
Animals.	2,000,000,000 lbs.
Combustion.	1,000,000,000 lbs.
Decay.	4,000,000,000 lbs.
	<hr/>
	8,000,000,000 lbs.
	= 8,571,428 tons.

Now, if the daily consumption of oxygen should continue the same, it would apparently take 945,998 years for all the oxygen of the atmosphere to be consumed—not destroyed but fully locked up. But we can not reduce the amount of oxygen except in a very small degree, say four or five per cent., without endangering the life of the higher order of animals. Hence it would take but a short time to render the existence of man impossible on the earth, if there was no means provided for restoring this oxygen to the air.

Fortunately the supply of oxygen can not be reduced so as to do injury, as the trees and plants restore it again as fast as needed.

WATERING THE STREETS WITH CARBOLIC ACID.—During the summer, most of the crowded streets of London have been watered on alternate days with a weak solution of carbolic acid, as has been the custom for the last four years, and there is no doubt that this excellent antiseptic and disinfectant has been very beneficial in a sanitary point of view. The inhabitants of those streets have often expressed satisfaction at the freshness, and removal of disagreeable smells, which this acid produces, and they regard it as an addition to their comfort.

The above note we clip from The London Medical Times, and add the wish that the same method might be tested in the cities of this country.

RECIPES FOR WHOLESOME COOKING.

SOUPS.

CONTINUED FROM APRIL NUMBER.

No. 5. VEGETABLE SOUP.—Put a little of five or six sorts of vegetables most in season into three quarts of water, with some onions, and two or three kinds of herbs, and a little celery cut small, and boil it gently for two hours. Strain it, and serve it with bread and beans, or peas.

No. 6. BROWN SOUP.—One pound of turnips, one pound of carrots, half a pound and six ounces of onions, one and a half pints of peas, four ounces of butter, and half a pound of bread. Cut the vegetables into small pieces; put them in a pan with the butter; cover the pan and let them stew over the fire till brown, occasionally stirring them; put in the peas with the water in which they were boiled; add sufficient boiling water to make three quarts altogether; next add the bread, which should be browned or toasted before the fire, but not burnt; season, and let the soup boil gently for three or four hours; rub it through a coarse sieve; return it into the pan; let it boil, and it will be ready to serve. If dried peas are used, they should be steeped for twenty-four hours in soft water, and boiled for two hours.

No. 7. BARLEY SOUP.—Three ounces of barley, one and a half ounces of stale bread crumbs, one ounce of butter, quarter of an ounce of chopped parsley, and half an ounce of salt. Wash, and steep the barley for twelve hours in half a pint of water, to which a piece of soda the size of a pea has been added; pour off the water that is not absorbed; add the bread crumbs, three quarts of boiling water, and the salt; boil slowly in a well-tinned covered pan for four or five hours, and add the parsley and butter about half an hour before the soup is ready to be served.

No. 8. CELERY SOUP.—Six roots of celery, one large turnip, two ounces of onions, four ounces of bread crumbs, one ounce of butter, one dessert-spoonful of flour, and half a pint of cream. Strip off all the green part of the celery, using only the white; cut it in shreds, reserving the inside of three of the roots to be added afterward; slice the turnip and onion, and put them with the celery into a pan; add two quarts of water, the bread crumbs, and a little salt; let all boil till the vegetables are perfectly soft; rub through a sieve; return it to the pan; add the celery (previously boiled till quite soft), the butter, and flour, well mixed; stir it, seasoning with a little mace; and, after boiling a quarter of an hour, stir in the cream, but do not allow it to boil afterward.

No. 9. HERB SOUP.—Quarter peck of spinach, one ounce of parsley, half a pound of bread crumbs, a quarter pound of butter, and a few green onions. About half boil the herbs; drain and cut them into small pieces; stew them in the butter half an hour, and dredge in a little flour. Put the bread crumbs into a pan with two quarts of water; boil till smooth; add the herbs, and season, and boil for ten minutes.

No. 10. SPINACH SOUP.—Quarter of a peck of spinach, two ounces of parsley, two carrots, two onions, one good-sized turnip, one root of celery, one ounce of butter, and a sprig or two of thyme. Put the vegetables and herbs into a stew-pan, with the butter, a little salt, and a pint of water in which mushrooms, or the stalks and parings of mushrooms have been well boiled; stew till the vegetables are quite soft; rub through a coarse sieve; add a quart of boiling water, a little salt, and boil all together a quarter of an hour.

No. 11. VERMICELLI SOUP.—Six ounces of vermicelli, two quarts of new milk, the yolks of four eggs, and one pint of cream. Blanch the vermicelli by setting it on the fire in cold water; when it boils, drain off the water, and put it into cold water; let it remain a few minutes, and then drain the water entirely from it; put it into a pan with the milk, and boil it; beat up the yolks of the eggs, and after gradually adding a pint of boiled cream, strain through a sieve. Take off the pan; add the eggs, cream, a small lump of white sugar, and a tea-spoonful of salt, and stir the soup on the fire till near boiling.

No. 12. BARLEY BROTH.—Four ounces of Scotch barley, four ounces of onions, four ounces of oat-meal, or Indian-meal, and two ounces of butter. After washing the barley well, steep it in fresh water for twelve hours; set it on the fire in two quarts of water, adding the onions and a little salt, and boil gently for an hour and a quarter. Melt the butter in a saucepan; stir in the meal till it becomes a paste; then add a little of the broth gradually, till it is a proper thickness to mix with the whole quantity; stir well together till it boils, and mix with a little of the broth a drachm of celery seed, pounded; stir well in the broth; simmer it gently a quarter of an hour longer, and serve.

SALADS.

Salads are very wholesome and refreshing, when the articles of which they are composed are fresh and crisp. They should be taken as part of the meal, and not after enough, and perhaps too much, of other food has been eaten.

MIXED SALADS.—Salads are chiefly composed of lettuce, mustard, cress of various kinds, sorrel, parsley, green onions, the tops of young spinach, corn salad, mint, endives, celery, radishes, young beets, beet-root, water cresses, &c. All, or any of them should be fresh gathered, and when nicely trimmed, repeatedly washed in salt and water, and well drained. The smaller salads should be put in a clean cloth and lightly shaken, but not pressed. They should then be arranged in a salad bowl; the celery, also divided, put in the center, and the smaller salads, such as radishes, mustard, and cress, placed between. When salad sauce or dressing is used, it should not be mixed with the salad, but put in the bowl first, the salad cut in small pieces and laid lightly over it, and the top ornamented with the boiled whites of eggs cut in rings, and slices of beet-root; or the same may be served separately.

EDITORIAL DEPARTMENT.



NEW YORK, MAY, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as endorsing every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.

EXCHANGES are at liberty to copy from this magazine giving due credit to THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

AN INTERESTING LETTER FROM WILLIAM ELLEN BRYANT.—The following letter from Mr. Bryant, has been placed at our disposal for publication in THE HERALD OF HEALTH by Mr. Richards, to whom it was addressed. It contains a lesson of such value to the thousands of young men of our country regarding simplicity in diet, temperance, and exercise, that we hope it will be read by all of them, not so much to gratify idle curiosity as to gain knowledge that may be of great service to them in the conduct of their lives.

NEW YORK, March 30, 1871.

TO JOSEPH H. RICHARDS, ESQ.—*Dear Sir:*
I promised, some time since, to give you some account of my habits of life, so far, at least, as regards diet, exercise, and occupation. I am not sure that it will be of any use to you, although the system which I have for many years observed seems to answer my purpose very well. I have reached a pretty advanced period of life, without the usual infirmities of old age, and with my strength, activity, and bodily faculties generally in pretty good preservation. How far this may be the effect of my way of life, adopted long ago, and steadily adhered to, is perhaps uncertain.

I rise early, at this time of the year about 5½; in summer, half an hour, or even an hour, earlier. Immediately, with very little incumbrance of clothing, I begin a series of exercises, for the most part designed to expand the chest, and at the same time call into action all the muscles and articulations of the body. These are performed with dumb bells, the very lightest, covered with flannel; with a pole, a horizontal bar, and a light chair swung around my head. After a full hour, and sometimes more, passed in this manner, I bathe from head to foot. When at my place in the country, I sometimes shorten my exercises in the chamber, and, going out, occupy myself for half an hour or more in some work which requires brisk exercise. After my bath, if breakfast be not ready, I sit down to my studies until I am called.

My breakfast is a simple one—hominy and milk, or, in place of hominy, brown bread, or oat-meal, or wheaten grits, and, in the season, baked sweet apples. Buckwheat cakes I do not decline, nor any other article of vegetable food, but animal food I never take at breakfast. Tea and coffee I never touch at any time. Sometimes I take a cup of chocolate, which has no narcotic effect, and agrees with me very well.

At breakfast I often take fruit, either in its natural state or freshly stewed.

After breakfast I occupy myself for awhile with my studies, and then, when in town, I walk down to the office of The Evening Post, nearly three miles distant, and after about three hours return, always walking, whatever be the weather or the state of the streets. In the country I am engaged in my literary tasks, till a feeling of weariness drives me out into the open air, and I go upon my farm or into the garden, and prune the trees, or perform some other work about them which they need, and then go back to my books. I do not often drive out, preferring to walk.

In the country I dine early, and it is only at that meal that I take either meat or fish, and of these but a moderate quantity, making my dinner mostly of vegetables. At the meal which is called tea, I take only a little bread and butter, with fruit, if it be on the table. In town, where I dine later, I make but two meals a day. Fruit makes a considerable part of my diet, and I eat it at almost any hour of the day without inconvenience. My drink is water, yet I sometimes, though rarely, take a glass of wine. I am a natural Temperance man, finding myself rather confused than exhilarated by wine. I never meddle with tobacco, except to quarrel with its use.

That I may rise early, I, of course, go to bed early: in town, as early as ten; in the country, somewhat earlier. For many years I have avoided in the evening every kind of literary occupation which tasks the faculties, such as composition, even to the writing of letters, for the reason that it excites the nervous system and prevents sound sleep.

My brother told me, not long since, that he had seen in a Chicago newspaper, and several other Western journals, a paragraph in which it was said that I am in the habit of taking quinine as a stimulant; that I have depended upon the excitement it produces in writing my verses, and that, in consequence of using it in that way, I had become as deaf as a post. As to my deafness, you know that to be false, and the rest of

the story is equally so. I abominate all drugs and narcotics, and have always carefully avoided every thing which spurs nature to exertions which it would not otherwise make. Even with my food I do not take the usual condiments such as pepper, and the like.

I am, sir, truly yours,

W. C. BRYANT.

OBJECTION TO WOMEN DOCTORS.—The London Lancet, an excellent Medical Journal in its way, is remarkable for the singular objections that it brings against women becoming practitioners of medicine. We believe we have noticed most of these objections as they appeared, and now proceed to notice the last and most remarkable one. "Women," says The Lancet, "hate one another, often at first sight with a rancor of which men can form only a faint conception; and they have become accustomed to a certain tenderness in sickness, arising from the different sex of the doctor, which they would surely and deeply miss under the proposed *regime*."

This objection, if not a very profound one, is certainly unique. "Women hate one another!" If every woman hated all women, this objection might have some force; but the hate between women is not universal. Their friendships are often pure, sweet, tender, lasting, and when one of their own sex is pure and strong, educated, and capable enough to become a really good physician, not only do women not hate her but they adore her even beyond reason. The hate between women is great enough we admit, and it is a shame that it is so; so is the foolish hate between men and men, and even between men and women. But if it was as great as The Lancet declares, then would the future of the race be hopeless indeed. We believe that women will have more respect and love for each other, when their sex gets out of the world of senseless frivolity and fashion that breeds such hate, and where hatred and jealousy reign with greater force than anywhere else in the world of thought and action.

Women, like men, with plenty of wholesome

work on their hands, do not get time to hate one another. We do not see why the same objection would not be equally applicable to all professions and pursuits. Where would this chain of reasoning lead, if followed out to its full extent? On the same ground, women could not become teachers of their own sex in seminaries; neither could they become dressmakers, milliners, nor belong to the same church where there were any other women. They could not even speak to each other in society, or be on friendly terms anywhere. What a sad state of affairs would then exist!

It may be true, as *The Lancet* says, that women will, in many, or even in most instances, prefer male physicians; this they will decide for themselves. We think, however, they will prefer the one who can do them the most good and the least harm, and this will depend on talent, skill, and knowledge, not on sex, and sometimes one sex and sometimes the other will have these qualifications in excess. Besides, if women, for any natural reason, prefer a physician of the opposite sex, as *The Lancet* declares they will, men will sometimes prefer women physicians, not from any impure reason, but because God has made it so. Men like the tenderness, and delicacy, and sweetness which good women bring to the bedside, as much as women like the strength and power which men bring there.

LAWS OF FERMENTATION—HEBREW CUSTOMS—RABBI ISAACS.—The Rev. Dr. Patten, D.D., of New Haven, Ct., has prepared a small volume of 129 pages 12mo, entitled "The Laws of Fermentation, and the Wines of the Ancients." It is just published by the National Temperance Society. Dr. Patten is a ripe scholar, especially in Bible and ancient literature. He has evidently given the subject under discussion a careful and exhaustive examination. For one very important aspect of the great cause of Temperance, Dr. Patten has given us an admirable and cogent argument. We most heartily commend this little work. In a recent conversation with the eminent Hebrew *savans* and Jewish

Rabbi, Dr. S. M. Isaacs, of this city, he stated some most interesting facts as to the customs of the Israelites, both ancient and modern, which corroborate fully the conclusions of Dr. Patten. The learned Rabbi made one remarkable general assertion, which will challenge some scrutiny. He said, that of the seventy thousand descendants of Abraham in this city, he does not know one confirmed drunkard, and that they seldom, any of them, drink to intoxication. In the Holy Land, they do not commonly use fermented wines. The best wines are preserved sweet and unfermented. In reference to their customs at their religious festivals, he repeatedly and emphatically said, "The Jews do not, in their feasts for sacred purposes, including the marriage feast, ever use any kind of fermented drinks." In their oblations and libations, both private and public, they employ the fruit of the vine—that is, fresh grapes—unfermented grape juice, and rasins, as the symbol of benediction. Fermentation is to them always a symbol of corruption, as in nature and science it is itself decay, rottenness.

No higher authority can be given than Rabbi Isaacs, as to the practices of the Jewish people. This testimony settles conclusively the question so often mooted, "What was that 'best wine' made by Jesus Christ for the marriage feast of Cana?" And not less decisively does it show, what was that "fruit of the vine" used by him at the institution of the "Lord's Supper." This sacred Christian feast was confessedly a substitute (and immediately followed), the Jewish feast of the Passover, from which all fermented things are carefully excluded. The pretense that the drunkard's drink was in any form provided or encouraged by Him who "came to save that which was lost," must be utterly abandoned before one can hope to banish drunkenness entirely, even from the pulpit, the pew, or the Communion-table. Let "judgment begin first at the house of God."

S.

MORNING LECTURES.—Rev. John Lord, LL. D., delivered in New York, the past winter and during March, twenty-five valuable lectures

on some of the most important personages who have figured in history during the past six hundred years. These lectures were delivered in the morning at 11½ o'clock, to over one thousand persons, and gave great satisfaction. The lecturer will deliver another course next season. The value of lectures in the morning, when the mind is fresh and vigorous, over lectures at night, when the head is weary, is great, and we hope they will become popular.

A HINDOO AT AN ENGLISH DINNER-TABLE.—B. K. C. Sen, a Hindoo gentleman of culture who has been lecturing in England, has returned to Bombay, where he lectured in one of the schools of learning, upon the sights and experiences of his life in Great Britain. As the Hindoo never eats flesh, he was greatly shocked at the sights seen on a dinner-table at dinner parties. He says: "The dining-room appeared to be more like a zoological garden; there were all sorts of fowls of the air, and beasts of the wilderness, and fishes of the sea, and creeping things laid on the table. They were about to start into a new life, as it were. I need not say I could not positively say whether they were alive or dead. These are the things which our English friends eat. I am glad I have run away from England. Oh Indian curry and rice, I must have them soon! But English fashions and dinners! These are really two things that are barbarous. I think there ought to be a protest against what is called 'fashion' in England. It is a dangerous thing, and makes frightful progress. The tail of the ladies' dress should be protested against, and the horrors of the English dinners ought to be protested against. If you, my countrymen, are really anxious to promote the welfare of your country, avoid these two things. Import into your country all that is good in England, but not these horrid things."

From a humane, or artistic point of view, B. K. C. Sen is right. A dinner-table covered with dead animals, however tempting to the palate, must not be thought about too closely, for the reflections will be like those of Mr. Sen.

The English have been sending missionaries to India for a long time. Would it not be wise for the inhabitants of India to send a few missionaries to England to teach the English simplicity and temperance?

CLIMATES FOR INVALIDS.—The New York Standard in noticing Mr. Bill's recent work on "Climates for Invalids" says: "It is not often that a book interesting to all intelligent people can be recommended especially to invalids. This, however, is the case with the volume above specified. It is a delightful volume for general perusal; it has a special aptitude for the suffering. Minnesota enjoys justly the reputation for a climate, a soil, and a scenery that present peculiar conditions for promoting health. Still, its general merits are not so widely and deeply appreciated as they ought to be. It lies to the north of the accustomed lines of travel, and it has been visited by comparatively few who did not go there to obey the claims of business. Much of the land is high and rolling, and extends many miles back from the eastern frontier. The general elevation of the State is one thousand feet above the sea, and these mighty tracts abound in pleasant and fertile valleys, large and exceedingly picturesque, as well as valuable forests, and superb lakes, which brim with the purest water, and teem with the finest of fish. Mr. Ledyard Bill, who is the author of "A Winter in Florida," and has apparently made the best of extensive facilities for studying the science of climatology, devotes his pages to illustrating and enlarging the points we have specified. He shows what the leading characteristics of Minnesota are, takes the reader a tour along the Upper Mississippi, visits the river towns and St. Paul, studies the climate, and the causes, cures, and phenomena of consumption. He talks plainly, politely, intelligibly, and interesting to invalids, and tells them where to go and what to see and expect. He has a good deal to say in regard to Duluth, its location and rapid growth, and the Northern Pacific Railroad. Finally, he contrasts other climates with Minnesota, and the result is not

unfavorable to the last-mentioned place. The book, then, is written by a man who has thoroughly inhaled his subject, and who performs to perfection the reciprocal process of exhaling it again. It abounds in valuable hints to travelers, tourists, and emigrants, as well as to invalids, and ought to be read at least by Americans, because it tells such pleasant news about an already cultivated portion of their own lands."

BONES INFLUENCED BY FOOD.—M. Passillon,

who has experimented on pigeons and rats with a view to determine the change in the composition of the bones, when fed on different kinds of food, reports to the French Academy that on analyzing the bones of the pigeons that had been fed with the strontia, there were found in a hundred parts of the ash of the bones:

Lime	46.70
Strontia	8.45
Phosphoric Acid	41.80
Phosphate of Magnesia	1.80
Residue	1.10
	<hr/>
	99.90

The ash of the bones of the rats that were fed with the alumina gave:

Lime	41.10
Alumina	6.95
Phosphoric Acid, etc.	51.95
	<hr/>
	100.00

while in the bones of those fed with the magnesia were found;

Lime	46.15
Magnesia	8.56
Phosphoric Acid	50.29
	<hr/>
	100.00

In November, 1869, we published in THE HERALD OF HEALTH an article on Parturition without Pain, in which the same principle was discussed. This essay, together with much original matter, in the form of a neat little book will soon be published and sold for \$1. It will

be ready in a couple of months, and will form one of the most important additions to medical literature for the people that has ever appeared. It will be a book which every woman should read.

¶ IS IT AIR, OR SOMETHING ELSE?—The entrance of air into a wound is the dread of the surgeon. When an abscess is opened he must prevent the air from mingling with the blood-clots if he would avoid putrefaction and its teeming accompaniment of animalcule life. Some eminent London surgeons inform me that they never squeeze an abscess, lest when the pressure is relaxed the air should be sucked in. Now, whence this dreaded power? Is it the air itself that causes putrefaction, or is it something carried mechanically by the air? A follower of Gay-Lussac would affirm the former; a heterogenist would refer the animalcules to "spontaneous generation;" a holder of the germ theory would ascribe the putrefaction to seeds or eggs floating in the atmosphere, and which, when sown upon the wound, sprout into this crop of minute organisms. Do any data exist which will enable us to say, with certainty, which party is right? I think so.—T. H. Huxley.

Professor Huxley takes the latter view of the subject, and believes air is poisonous to wounds because of the germs in it which grow. How much injury these germs do to the air-passages is not known, but no doubt these passages are not so susceptible of injury as fresh wounds. They are used to their presence to a certain extent, still they must do harm in the lungs, and who can tell how much?

PRESERVED MEAT.—Dr. Stein, of Dresden, while lecturing lately on the preservation of food, opened a tin canister of meat, preserved by what is known as Apert's method, and prepared by him in 1851. The meat, on examination, it is said, was found to be as fresh, and of as good a flavor, as when placed in the canister nineteen years previously.

How to Treat the Sick.

COLD WATER TREATMENT OF TYPHOID FEVER.—Medical journals contain constant accounts of the excellent success of medical men in treating typhoid fever by cold water. This method has been practised by Hydropathic physicians during the past twenty-five years with excellent success, and there are multitudes of cases where persons who were not physicians at all, dissatisfied with the drug treatment of this disease, have carried their friends and members of their family most successfully through this fever by the Hygienic treatment alone, much to the disgust of medical men who might be looking on. Now, however, when this method of treatment has become popular, medical men claim it as having originated among themselves. The method now employed in the German Hospital of New York by Dr. Tyndale is as follows:

"1. The necessary reduction of temperature is best and most rapidly effected by immersing the whole body."

2. The water should be as cold as can be had.

3. The patient should be bathed as often as the temperature of his body, measured in the rectum, rises to forty Centigrade (about one hundred and four Fahrenheit). Since the intensity of the manifestations of disease vary much, it may occur that in one case one or two baths in the twenty-four hours will suffice, whereas, in another, as many as twelve or sixteen will be required in the same space of time.

4. The length of time for each must be governed on the one hand by the degree of fever heat, on the other by the temperature of the water used. On the whole, it will be found that in a bath varying from five to ten degrees Centigrade, an immersion of from seven to ten minutes will suffice. Should the temperature of the water be above ten degrees Centigrade,

the bath is to be continued for fifteen minutes, and if above fifteen degrees Centigrade, still longer.

No attention needs to be paid to the seeming discomfort of the patient, manifested by complaints, nor to the chill often occurring during the bath and continuing for sometime afterward, as they are of no consequence.

5. After the bath, the patient should be carefully wiped dry (not rubbed), especially his feet and toes. If the water has been of very low temperature, the feet may be enveloped in warm cloths, as many patients complain of pain in the feet after a very cold bath.

Opinions differ as to whether it is best to immerse the patient in a cold bath (say of ten degrees Centigrade), at once, or to have the water at a temperature more nearly the same as that of the body, and effect a gradual reduction by a slow addition of cold water. Niemeyer, who may be considered the best authority upon the subject, is in favor of a gradual reduction. With due deference to this opinion, however, I must say that repeated trials have satisfied me that by a sudden immersion in cold water two advantages are gained: first, the reduction of temperature will be greater, more nearly approximating the normal temperature of the body; second, less time will be required, and consequently the patient will be less annoyed. In the cases under our observation, we have found from one-half to two hours after sudden immersion the temperature reduced to thirty-eight and a half degrees Centigrade (normal), when before the bath it had been from forty to forty and a half degrees Centigrade.

When the body has not been above thirty-nine and a half degrees, we have been in the habit of enveloping the patient in wet, cold sheets for fifteen minutes. In other cases in which it was desirable to move the patient as little as possible, we have resorted to a spongy bath of cold water and vinegar. Both methods

produce a limited decrease of temperature, not exceeding one degree.

The thermometer is indispensable as an aid to the cold water treatment, as without it, this method would lack the necessary safety in its application. The rectum is undoubtedly the best point of observation of the thermometer. In five minutes after the introduction of the bulb, the mercury will have reached its maximum height, and no disturbing influence can injure the correctness of observation, as is often the case when introducing the bulb into the axilla.

The severer the case, the oftener should thermometrical observations be made. In milder cases, in which the evening temperature (always higher than the morning temperature) does not exceed forty degrees Centigrade, two or three observations may suffice; whereas, in severer ones, this should be done every two hours, day and night, in order not to miss the right time for the repetition of the bath."

Twenty years ago, Dr. Joel Shew of New York, wrote as follows:

"In practising these ten years in this city, I have had numbers of opportunities of treating the different forms of typhus. I have adopted almost all conceivable ways according to the Hydropathic method, and have been successful in almost every instance. In some cases we have been able to do what we would; in others, only what we could. Some are so afraid of water, we can do but little; and some have such poor conveniences and so little help, that we can dopt hardly more than a sort of *nursing* course, and poor enough at that, often, among the poor of this great city. I have effected some admirable cures in typhus by tepid water alone, and not a great amount of that. In other cases we are used wet-packs, ablutions, shallow baths, &c., etc., to the fullest extent, and with the best success."

But many years before this, Pressnitz published to the world the following method varying but little from that now adopted in hospitals,

but then scouted as dangerous and reckless in the extreme:

"1. Envelop the patient in one or more heavy wet linen sheets, according to the heat and strength, the sheets not much wrung out, and to be frequently renewed as often, at least, as they begin to grow dry. There must not be much covering over the sheets. In severe cases the patient should be kept in the wet-sheet the most of the time until the fever is broken up. As much fresh air as possible is to be admitted into the room. The sheet should always be doubled, and wet towels applied to such parts as the armpits, between the limbs, and wherever one part comes in contact with another.

2. The cold bath is given three or four times in twenty-four hours, and oftener, should there be much heat. If the patient is very weak, the water is used mild, but never higher than twenty degrees Reaumer (77 degrees Fahr.), and this should be diminished from time to time until it can be borne cold. The bath should, if possible, be administered to the patient in a reclining posture. At the same time the back of the head and neck should be bathed in water of the same temperature as the general bath, ending always with the water cold. The surface of the body should be rubbed constantly while the patient is being bathed, and the bath continued until the temperature of the armpits is the same as the rest of the surface.

3. As the patient becomes able to take nourishment, give cold milk, fruit, and farinaceous food in small quantities, always cold, and at intervals of the usual meals. Great care is necessary in the food. Water at all times to be drank according to the dictates of thirst.

4. Use the *umschlag*, or wet-girdle, all the time when the patient is not in the wet-sheet.

5. Injections, or clysters of pure water, are to be given if the bowels do not act naturally without; the water cold, if the patient is not very weak, one pint at a time.

The object of the whole treatment is to supply the body amply with coolness and moisture, in order to counteract the tendency of the disease to dry up and consume the natural juices."

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Chills and Fever.—"Many of the people in this city, population five thousand, have chills and fever. New comers are not afflicted till the summer heat comes in June, July, etc., but having once had them, will have them all the year. The UNIVERSAL remedy is quinine, people carry it in their pockets done up in convenient doses to take at their shops, and as they walk the streets. They even put it in their coffee. I say, I'll not take it. They say, 'Wait and see; you will be as glad to get it as we are. People have been here who tried Water Cure for it, but were glad to give it up, and take the quinine. The blood gets too thin in this hot country to bear water treatment.' If consistent with your arrangement will you publish an article on this subject, giving the HOME treatment for this disease? By so doing you will confer a great favor on myself and family."

People who wish to be healthy should not live in such a miasmatic place as this. There are plenty of places where they can go and not be subjected to the unhealthful influences of malaria. If a person is located in such a place and CAN NOT leave it he should try and get away during the hot weather. If he can not do this he must do the best he can to obey the laws of health, and run the risk, for he can not be sure of escaping it however strictly he may live, although the more careful he is to obey the laws of hygiene the less liable he will be to have the disease. Great care should be taken to keep the excretory organs, the skin, bowels, and kidneys, in an active condition by proper bathing, diet, and exercise, and also to avoid eating more than the system demands. In warm weather a daily sponge or towel bath should be taken, also some form of sweating bath—Turkish, vapor, or lamp—as often as once a week. The diet should consist of fruit, vegetables, and simple farinaceous preparations, fruit predominating if it can be had. The sleeping-room should be up stairs, and on the sunny side of the house. The treatment of this disease is very simple. Its main features

are a very strict and abstemious diet consisting largely of ripe fruits, and free action of the skin and bowels. Where it can be had the Turkish bath is to be preferred to any other. Where it can not be had use the vapor, lamp, or hot water bath during the cold stage—the object being to induce a profuse perspiration, and help the system throw off the malarious poison through the skin.

Flatulence, its Cause and Cure.

"I am very much troubled with flatulency of the bowels. I am a strict vegetarian, and can not imagine the cause of it, and, of course, can not cure it. If you will enlighten me a little respecting it, in the next issue of your valuable HERALD OF HEALTH you will oblige a constant reader. Don't tell me to bathe every day, for I have practised it for four years. I don't think it is for the want of exercise, for I walk on an average two miles a day, sometimes twice that. I will watch eagerly for your reply."

Flatulence is simply one of the many symptoms of indigestion. Whatever tends to weaken the digestive powers of the stomach and bowels may be counted among the causes of flatulence, and whatever aids in improving the digestion may be reckoned among its remedies. Plain, easily digested food, not over two or three kinds at a meal, two meals per day, no eating between meals, no drink at meals, slow eating and thorough mastication, moderate quantity of food, gentle exercise, and thorough kneading of the bowels after each meal, as much out-door exercise as strength will allow, climbing hills, sawing or chopping wood, rowing, etc., where practicable, are the most important things to be observed in the hygienic home treatment of this very common affection. In the case of this correspondent, he probably eats too much, too many kinds at a meal, too often, food too difficult for digestion, does not masticate his food sufficiently, and does not take enough exercise. Vegetarians can as often do live as unhygienically as meat-eaters. One of their greatest errors is eating too much

Many of them seem to think that because vegetables, bread, and fruit are healthful that the more they eat the better. They had better eat meat, and eat a moderate quantity, than to over-eat as many do.

Cause of Poor Teeth.—"What is the principal cause of the almost universally defective condition of the teeth of the American people? There is no country on the globe where the people suffer so much from poor teeth, and where dentists are so common as here. Among some nations, indeed, unsound teeth and dentists are unknown."

There are many causes which aid in destroying the teeth, as using very hot drinks and food, the use of saleratus, uncleanness, etc., but the principal cause is the feeding of children upon fine flour bread, fat, sugar, and other carbonaceous articles, to the exclusion of food that contains lime, phosphorous, silex, and other minerals in an organized form, which are necessary to the proper development of the teeth, and especially the outer covering or enamel. The system can not make something out of nothing, neither can it make sound, healthy teeth unless it has the necessary material supplied in the food. Fine flour does not contain the required material, while unbolted wheat meal does, and children who have plenty of the latter to eat will have good sound teeth.

Lemons and Biliousness.—"In your answers to correspondents, please inform me whether lemons are good for biliousness or not."

As a general rule they are. Sometimes, however, the stomach is not in a condition to bear so strong an acid. In cases of biliousness the acid and sub-acid fruits should constitute a large part of every meal. There is nothing better.

Cure for In-growing Toe-Nails.—This is a very painful and troublesome affection, caused by wearing too tight shoes, and cutting the nails too much at the corners. To remedy the difficulty wear looser shoes, and cut the nails shorter at the center than at the corners, so as to leave them in the form of a crescent, the corners representing the two horns. Also scrape the upper surface of the nails in the center as thin as comfort will allow.

One operation is usually sufficient. In very bad cases two or three may be found necessary.

Climates for Weak Lungs.—"For a person with weak lungs do you advise MOUNTAIN or SEA air. Or in the case of a person who lives in sight of, but about twelve or fourteen miles from the mountains, afflicted in the way mentioned, would you advise a sea or mountain resort in the summer?"

In a great majority of cases a dry mountain atmosphere is best for weak lungs. The water should be pure and soft, and the temperature as nearly uniform as possible. The eastern slope of the Rocky Mountains—Montana, Wyoming, and Colorado—also Minnesota and Dakota, supply these conditions, and are the most desirable places for persons with weak lungs to spend the summer months. For further information see a book which we have just published entitled "Climates for Invalids." Price \$1.25.

Spirometer for Weak Lungs.—"Is the periodical use of a spirometer advantageous for a person with weak lungs?"

There are different kinds of spirometers, some of which are good and some bad. Those where the air is expelled from the lungs without straining them, are beneficial if used regularly and judiciously. The kind in the use of which the air is forced back into the lungs is bad. They strain the lungs, and as generally used do more harm than good.

Soda Bread.—"Is bread made to rise with buttermilk, soda, and eggs, wholesome, either fresh or stale?"

No. It is better stale than fresh, but it is bad either way. Soda should never be used in the preparation of foods. Eggs should never be cooked hard, as they must be in bread and cake, therefore they are objectionable especially for weak stomachs.

Fruit between Meals.—"Is it injurious or beneficial to eat fruit between meals?"

It is injurious to eat ANY THING between meals. The stomach needs rest, and must have it, or sooner or later it will fail to perform its duty. Eating fruit or any thing else between meals keeps it constantly at work, and robs it of its necessary rest.

NOTICES OF NEW PUBLICATIONS.

COMMON SENSE FOR YOUNG MEN ON THE SUBJECT OF TEMPERANCE. Preached by Henry Ward Beecher, Feb. 5, 1871. New York: National Temperance Society and Publishing House.

This discourse by Mr. Beecher is from the text, "There is a way that seemeth right to a man, but the ends thereof are the ways of death." He bases his arguments in favor of Temperance on the ground of expediency, and on the higher grounds, and he finds plenty in both. It is not expedient to use alcoholic stimulants because:

1. Healthy natures never crave them.
2. Because they are not needful.
3. Nor palatable at first.
4. Nor economical.
5. And because drunken habits open the door to many temptations which no man has a right to encounter.
6. Because a young man with drunken habits loses the confidence of respectable and trustworthy men.
7. Because drunken habits develop evil passions that would lie dormant.
8. And because a man has no right to jeopardise his own and others' prospects.

Without however resting the argument here, Mr. Beecher puts it on higher grounds, and presents other motives for living a temperate life.

1. Because man is bound to be as noble a specimen of mankind as he can be.
2. Because he has no right to sport with his moral nature.
3. Because moral principle demands that the animal nature shall be subject to the moral and spiritual.
4. Because no one has a right to set a bad example to others who may be weak. And
5. Because no man has a right to be neutral in the great work of Temperance.

This sermon is the first of a series of discourses to be published on Temperance, and they promise to be among the best efforts of the National Temperance Society in promoting a great cause.

"THE HOUSE ON WHEELS." Boston: Lee & Shepard. By Madame De Stols. Translated from the French, by Miss E. F. Adams.

This is the story of a disobedient child, stolen by the Gypsies, and retained in their keeping two years. He goes through much suffering, but in spite of the evil examples around him is able to retain the ingenious simplicity of childhood, and the pious love of God, which had been implanted in his young mind by the faithful teachings of intelligent and faithful parents. The character of the Gypsy girl, Gella, is well sustained, and her native grace, goodness, and beauty afford a fine contrast to that of the savage Heronules. The work abounds with refreshing pictures of happy domestic life, in which all the virtues, such as truth, gentleness, and all moral excellence are practised and enforced. We have tenderness coupled with force and courage, and devoid of that mawkish sentimentality and sickening babyishness, which fill our American literature for children with foolish epithets and pet names.

CLIMATES FOR INVALIDS, ETC.; also, *Hints to Tourists, etc.* By Lydard Bill. New York: Published by Wood & Holbrook, 13 & 15 Laight St.

This is a work somewhat in the vein of, and similar in object to the Author's sketches of Florida, of which we have heretofore spoken. It abounds with hints and statistics of great value to the invalid, who may be seeking some genial spot in which to recuperate a wasted system and restore failing health. The book contains over two hundred pages, is illustrated with a fine view of the famous Falls of Minnehaha, and contains thirteen chapters on those topics of most interest to invalids, or to a very large class of persons not invalids, who, in changing their residence, wish to know where the air is good, the water pure and soft, the soil and scenery varied and interesting, and the people enterprising and progressive. Much of the work is devoted to the far-famed State of Minnesota, with which the author is familiar. The water, atmosphere, and people are sketched. The chief towns are noted and described, and two full chapters are devoted to a careful analysis of its climate, which is remarkable in many ways. We wish to call special attention to this feature of the book, for in no other work has the subject of climate as affecting health and disease been more conscientiously and thoroughly treated. The hints to invalids are also full and valuable, and the chapter on where to go, and what to expect will help the traveler to avoid much loss of time, and will also secure the most good at the least expense.

Other climates than Minnesota are sketched with care, and the whole volume is handsomely printed and bound, and sold for \$1.25. We commend it to all who wish an honest work at small expense.

LIGHT AT EVENTIDE; being a Compilation of Choice Religious Hymns and Poems. By the Author of "Chimes for Childhood," "Echoes from Home," etc. Boston: Lee & Shepard; New York: Lee, Shepard, & Dillingham.

This is indeed a most beautiful collection of the choice thoughts and heavenly inspirations of men and women eminent alike for intellect and piety in all ages, and without distinction of creed. It will be found a delicate and a highly appreciative gift, being handsomely printed and bound. Indeed, the impassioned poem, beginning "I love thee, O my God," by St. Francis Xavier, commands itself to every devout mind as one of unequalled depth and purity; while the rare old song of "O Mother dear, Jerusalem," attributed to St. Gregory, is of itself worth the price of the volume.

LITTLE FOLKS ASTRAY. By Sophia May. Boston: Lee & Shepard.

This is a sketchy series of rather uninteresting adventures for very, very young children. The worst of the intimations is the careless moral training which the Parfins and Cliffords obtain. We understand that filial obedience is an exploded, or at least a very old-fashioned virtue in our age of progress. Defects of character, which will entail lasting misery upon the child, may be amusing; and to be tolerated in its early experience, but a

discipline only will so regulate and eradicate them as to render the after career hopeful and reliable. Many a child reading how Flyaway Clifford is petted and endured, because her waywardness happens to be engaging, will fold habits of order, obedience, and thoughtfulness in high contempt. Any child of three or four years can understand all that is written in this book of Little Folks Astray, and because it is so understandable to him, the absence of moral insignificance is the more to be reprehended. He will infer that willfulness is a grace, and perverseness delightful.

THE SERMONS OF HENRY WARD BEECHER IN PLYMOUTH CHURCH, BROOKLYN. 1st, 2d & 3d Series. Reported verbatim by T. J. Ellinwood. 3 vols. 8vo. New York: J. B. Ford.

To the admirers of Mr. Beecher we need say nothing in praise of these sermons. Like meat to hungry men, they come to Christian people—feeding and strengthening their Christian life. His own words best give us an idea of the quality of food furnished us in these books.

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The three volumes contain seventy-nine sermons, comprising those preached between September 1868, and March, 1870. The books are handsomely bound, and a fine steel portrait of Mr. Beecher is given in the first volume.

THE DUEL BETWEEN FRANCE AND GERMANY; with its Lesson to Civilization. A Lecture. By Charles Sumner. Boston: Lee & Shepard. 12mo. 75 pages.

Charles Sumner never did a higher service to civilization than by the preparation of this lecture. We earnestly wish it might be read by every young man and young woman, who may in any way be affected by war and its horrors. It would do something to prevent, and, perhaps in time do away with them altogether. War can never be reconciled with true civilization. It is a relic of the barbarous ages, handed down to us from remote times. Man in his true estate is not a fighting animal, and when we see nations settling their differences by the sword, we know at once those nations are more or less barbarous. How worthless is all the glory that comes from bloodshed; and, too frequently how poor the results to justice. We do not say that the sword should never be unsheathed, for

there may be times for its sway, but rare indeed. If man ever on our globe reaches his true destiny, war, like duelling, will not be known. War is only another name for duel. A war is a duel between thousands instead of between single persons. And there is no reason why we should tolerate the one more than the other. Charles Sumner has put this subject in its true light, and if his words could reach the young of the world before their heads and hearts are hardened, good results would come of it.

OUR GIRLS. By Dio Lewis, A. M., M. D. New York: Harper & Brothers.

This work, while written in an easy, popular vein, discusses important topics. Beginning with a chapter on Boots and Shoes, it fires away right and left, thus: How girls should walk and dress; how they torture their bodies; stockingsupporters; large women, small women; idle girls; work for rich and poor; gentility, matrimony, music, French, dancing, the theater, stomach, and soul; sunshine and health, amusements, education, and heroic women. The spirit of the book is beautiful. The Doctor aims to impress on young girls the duty of living truly, of avoiding what is bad, of seeking what is good and noble. We are sure it will fire the hearts of very many of the sex with an enthusiasm that will take them out of the lower into the higher spheres of life and action. Compared with other works from the same pen, this, in our view, surpasses them all, and we rejoice at its wide circulation.

THE SOCIAL STAGE: Original Dramas, Comedies, Burlesques, and Entertainments, for Home Recreations, Schools, and Public Exhibitions. By George M. Baker, Author of Amateur Dramas, etc., etc. Boston: Lee & Shepard; New York: Lee, Shepard, & Dillingham.

The title thoroughly explains the purport of the work, except that the term drama is rather too ambitious. The collection is rather a collection of dialogues than dramas. There is no development of character, nothing of a creative import. Certain situations are predisposed, and individuals talk in accordance. They are moral, well disposed persons, but not very brilliant. Two of the entertainments are worthily devoted to the Temperance reform, and though the plot is most unnatural and transparent, we are willing to believe that villains do work in just such a bungling way to carry out their purposes, and that a miserable wretch who for five years has been a hopeless sot, may almost miraculously come to his better mind; and, at any rate, for the sake of the cause, we are willing to accept the situations.

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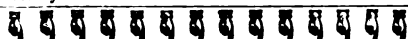
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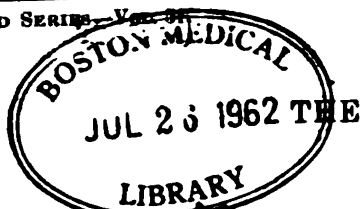
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CONTENTS FOR JUNE, 1871.

GENERAL ARTICLES :		Page	EDITORIAL DEPARTMENT :	
Drink, Pauperism, and Crime— <i>Harvey P. Peet, LL. D.</i>	241		The Golden Decade	273
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Birdsall</i>	245		How to Abolish War	274
The Bright Side (A Poem)— <i>Phoebe Cary</i>	249		How a Centennarian Lives—The Value of a Clean Mouth	275
Cousin Lucy's Story; or, Should Consumptive's Marry— <i>Mary Atherstone Bird</i>	250		Wheat-meal Flour—Chloral Poisoning—Normal Institute—Climates for Invalids—A Hygienic Shoemaker	276
The Big Bell (A Poem)— <i>George W. W. Houghton</i>	257			
Summer Resorts— <i>Rev. Charles H. Briggs</i>	259		How to TREAT THE SICK :	
Spirit and Form, or the Relations of the Body with the Soul— <i>Rev. Phebe A. Hansford</i>	264		How I Cured a Man in a Decline	277
Food, Size, Climate, etc., as Affecting Longevity— <i>E. Ray Lankester, B. A.</i>	267		Care of the Teeth	278
Studies in Hygiene	269			
Recipes for Wholesome Cooking—Sandwiches and Beverages	272		ANSWERS TO CORRESPONDENTS :	
			Treatment of Tetters—To Prevent Hair Falling Out—Epistaxis, or Bleeding from the Nose—Reading after Meals	279
			How Much to Eat—Age and Youth Sleeping Together—Swelled Knee—Shaving—Goiter, or Swelled Neck	280

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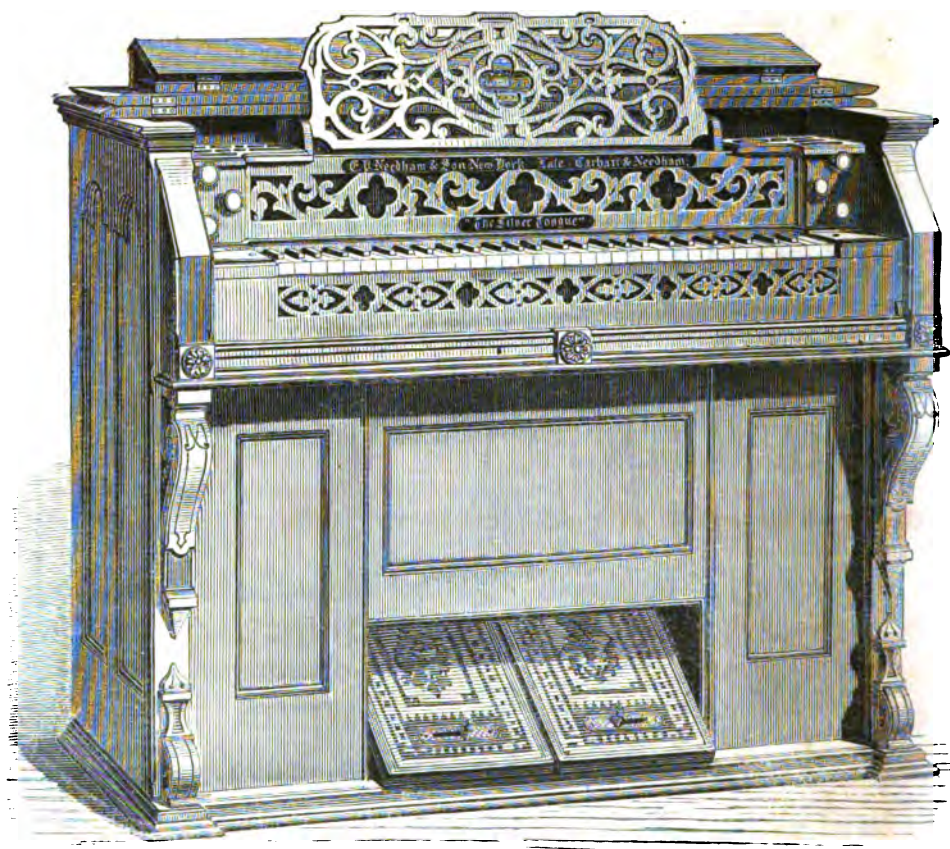
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VOL. 17, No. 6.]

NEW YORK, JUNE, 1871.

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A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

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No. VIII.—DRINK, PAUPERISM, AND CRIME.

BY HARVEY F. PRET, LL. D.

IN preceding articles have been shown the deteriorating effects of alcohol on the drinker, and on his offspring—we say the drinker, for the difference of results between the moderate drinker and the confirmed drunkard is in degree, not in kind—the two characters approach each other through almost insensible gradations.

It has been shown that the habitual use of alcoholic stimulants impairs the digestion, poisons the blood, deranges the liver, lessens the power of resisting cold and heat, weakens the heart and lungs, dims the senses, clouds the higher faculties of the mind, and excites to unnatural activity the lower faculties. The man who drinks freely, even if seldom to complete intoxication, becomes more and more irritable, quarrelsome, unreasonable, selfish, lascivious, brutal. It is not without reason that drunkenness has been called a beastly vice, as assimilating man to the beasts, by stimulating his animal propensities and clouding his higher faculties—though as beasts reject alcoholic drinks, the vice might more appropriately be styled

devilish. Certain it is that if men should wish to make devils of themselves, drinking alcoholic stimulants to excess is the readiest and surest means known for attaining that end.

When to these effects of alcohol in the individual we add the fact that his offspring must suffer from his sins; that they will be, as a general rule, less vigorous, less intellectual, less moral than the offspring of his temperate brothers and sisters, we can well believe that the use of alcohol is the great evil that, more than all other causes combined, has been a clog on the progress of the human race, dragging so fearful a proportion of it back to a barbarism worse than that from which it had been slowly emerging during the prehistoric times.

The term *barbarism*, however, is a very inadequate expression for the condition of a community where intemperance holds full sway. Barbarians and savages are rude, lawless, ignorant, unpolished; but they are apt to be strong, healthy, faithful to each other, attached to their friends and kindred, even long-lived. They are often progressive. Their offspring may be

better than themselves. From barbarians gradually improving under the influence of Christianity have sprung the highest types of the human race.

A community of drunkards presents a very different aspect. Weakness, disease, deformity, and premature old age are its physical characteristics. In family affection, in morals, and even in intellect, a confirmed drunkard is far below an average savage, such as we read of in the early history of our country, before the "fire-water" of the white traders had debased the savage to the common drunkard level.

It is a suggestive fact that intoxication thus reduces the savage and the civilized man to one common level of degradation. The drunkard is, for the time being, below even the idiot; humanity can not fall lower.

As the invariable effects of indulgence in alcoholic stimulants is to weaken, and then to destroy both the moral and physical powers of the individual, the habit is injurious to society in a double sense: it increases the number of criminals, and it increases the number of paupers.

That intemperance, more than any other cause, fills our prisons and our poor-houses is a fact patent to every observer. Let every reader look around on his own circle of acquaintances and he will find that those who are dangerous to the community, who make work for lawyers, and sheriffs, are, as a general rule, those who drink to excess. And the same class, with their wives and children, form the greater portion of those for whose support their temperate neighbors must be taxed.

We will cite a few statistics, such as we happen to find readily accessible, to show how a large proportion of the crime and pauperism in our country is traceable to the use of intoxicating beverages.

The convictions for serious offenses reported by the sheriffs of the sixty odd counties of New York for the year 1866, were 2,055; of which the criminal in 1,160 cases was stated to have been intemperate; in 492 temperate; while in the other 413 cases no information on this point was given. The next year, 1867, out of 2,045 cases, 1,093 were intemperate, and 500 unknown. In each year, it will be seen, considerably more than two-thirds of the criminals of the State, so far as their habits were known, were intemperate. It is probable that a considerably larger number of the unknown cases were also intemperate; and, in many cases, men reckoned ordinarily temperate commit crimes under the influence of an unwonted indulgence in alcoholic

stimulants. In England, it has been a common remark of the judges, from the days of Bacon and Sir Matthew Hale downward, that from three-fourths to five-sixths of the criminal business brought before them sprang directly or indirectly from intemperance.

Of the commitments to the jails of the several counties in New York in 1866, the number reported as temperate was 1,701, and intemperate 3,653.

Turning to the records of minor offenses in the cities of our State, we note that from the eighteen incorporated cities of New York in 1869, there were returned 50,472 cases, in which the culprit was temperate in 3,579; intemperate in 28,577; unknown cases, 18,316. These statistics make it a probable conclusion that about nine-tenths of the crime and disorder in our cities is to be ascribed to intemperance.

From the Eighth Annual Report of the Commissioners of Public Charities and Corrections for New York City (1867), it appeared that out of 47,318 commitments, there were 14,125 for intoxication, and 14,728 for disorderly conduct, in most cases only a synonym for partial intoxication. The returns do not show what proportion of the cases of other offenses were due to intemperance; but doubtless, judging from general experience and observation, a large proportion. Of the cases of murder and manslaughter brought to trial and conviction in our State in 1869, the criminal was returned as temperate in four cases, and as intemperate in twelve, just three-fourths. About as many cases were returned as unknown in this regard. As we all know how unlikely it is that a strictly temperate man should commit murder, and how apt an intoxicated man is to indulge in reckless violence, with or without provocation, it is certainly probable that if the cases marked as unknown should be known, they would not diminish the proportion of homicides chargeable to alcohol. The newspapers bring daily reports of murders that would never have been committed but for the frenzy or the recklessness induced by intoxication. Very recently a man was hanged in this city for the murder of a friend and comrade, on account of some trifling dispute brought up while the parties were excited by liquor. And still more recently, in another city of this State, a physician who when sober was an estimable man, beat out the brains of a gentle and loving wife, while crazed by alcohol. A well-informed writer has estimated that, taking the whole country, alcohol is annually chargeable with three hundred murders and four hundred suicides.

Equally prominent is the use of alcohol

among the causes of pauperism. In Great Britain, where the density of population makes destitution inevitable, in many cases from the mere accidental fluctuations of trade, or from loss of health, it is still found that the number of paupers is immensely increased not merely by intemperance, but also by that habitual drinking which some would call temperate or moderate. Some careful observers estimate that nine-tenths of the pauperism in their localities is due to the use of alcohol; the more moderate say at least one-half.

In this country, where labor is in greater demand than in England, there would be very little pauperism were it not for intemperance. Five hundred millions of dollars annually which should go to make homes comfortable, or to lay up a reserve for sickness, seasons of scarcity of work, and old age, are spent in the dram-shops. Add to this waste of money the waste of time and the deterioration of skill and strength, and the direct loss to families through indulgence in alcohol may be safely set down for our country at a thousand millions annually, equal to a comfortable income for a million of families. Hence untold suffering and privation among the families of those whose custom maintains the liquor traffic; hence, in seasons of distress and scarcity, it is chiefly the families of the intemperate who must be saved from starvation by public relief. Moreover, many thousands of husbands and fathers descend annually into the drunkard's grave, leaving widows and orphans by hundreds of thousands utterly destitute, to be supported by the community, and the children in too many cases on growing up, to be dragged by early associations and habits into the same maelstrom of intemperance, vice, and poverty, in which the parents were engulfed.

The connection between intoxicating drinks and crime and poverty had become proverbial thousands of years before the more concentrated forms of alcohol were discovered. "They that tarry long at the wine," said the wise king of Israel, are those "who have sorrow, contentions, babbling, wounds without cause." Multitudes who have yielded to the temptation "in looking on wine when it is red" have found that "it biteth like a serpent, and stingeth like an adder." That "he that loveth wine shall not be rich" is as true now as it was three thousand years ago. Yet wine is a mild agent of evil compared with the fiery potations of modern times.

The connection of indulgence in alcohol with theft is less immediately obvious than its connection with violence, idleness, and debauchery. Still it is notorious that when intemperance

brings poverty, the unappeasable and overmastering appetite for drink, to which all the comforts of home, the esteem of others, the happiness of wife and children have been ruthlessly sacrificed, will sooner or later drive its victim to crime to obtain the means of gratification. There are cases of people who are honest when sober giving way to the impulses of kleptomania when excited by drink; and in the general blunting of the moral sensibilities under the influence of frequent potations, that of honesty is weakened with the rest, and succumbs in the hour of strong temptation. And, if the drunkard still retains too much of early-instilled pride of character to steal himself, his children, having no good moral instruction at home, and no training to industry, are rapidly educated to crime in the streets. It has been found, in fact, that two-thirds or more of the children committed to houses of refuge, were the children of intemperate parents.

We have spoken mainly of the intemperate; but, let not the reader suppose that those who drink moderately are safe. Every moderate drinker inscribes his name on a roll from which the great army of drunkards draws its doomed conscripts. The lot may fall on himself; it is more likely to fall on his children. There is no absolute safety except in total abstinence.

How many who drink moderately have seen some promising son or brother, the delight of the parents' eyes, looked on by all as destined for a career of usefulness and honor, acquiring a taste for alcohol in some mild form at the social board; and in the space of a few years sacrificing to that appetite all his hopes of earth and heaven!

The memory of multitudes will enable them to parallel the subjoined sketch from their own knowledge.

Some sixty years ago two brothers divided the farm of their father, an industrious man, who, as was then the almost universal custom, took his moderate daily dram. The elder brother was temperate and industrious. The other loved to drink at frolics, trainings, and elections, and soon entered on the drunkard's downward road. Years passed, and while the temperate brother improved his property and reared children, distinguished for intelligence and thrift, the intemperate one mortgaged his farm, and left his widow and children destitute. The descendants of the temperate brother now rank high in the community where they live. The younger son of the intemperate brother after struggling for years with the evil influences to which inherited strength of appetite and

weakness of self-control subjected him, ended his life by suicide, and his children are paupers.

In this family whose history has just been sketched, it is somewhat remarkable that not only the fathers were brothers, but their wives were sisters. This fact brings out in stronger relief the debasing influence of alcohol. In many other families where one branch is seen gradually to rise while another branch falls, it will be found on inquiry that the former maintained habits of temperance, while the latter traveled the downward road of intemperance.

And what is true of families is true of that aggregate of families which constitutes a nation. The strictly temperate portion of a nation is always the better portion; the main promoters of education and religion, the conservators of public morals, the creators and guardians of national wealth. It is fortunate for humanity that the families in which intemperance prevails soon become extinct. But for this rule of "natural selection" which causes the temperate to flourish and multiply while the intemperate become feeble and waste away, the future of our race would be dark indeed.

Yet while cherishing the consolatory faith that the powers of good will finally prevail over the powers of evil in this conflict as in others, let us not abandon the multitudes of our own brethren, who are now hesitating between the upward and the downward road. Let us not forget that, as intemperance found so many victims among the children of our fathers and brothers, it may find victims among our own. Let us do what we can to enlighten, to warn, and, so far as public opinion will permit, to restrain. To restrain those who choose to drink may be impracticable, but means can be found to reach those whose business it is to manufacture drunkards. The trade should be rendered discreditable, and, what will touch those who ply it much more nearly, it should be subjected to penalties that will make it unprofitable. So long as men can make money by pandering to intemperance, it will in too many cases be in vain to appeal to their moral sense, by showing them the amount of misery and crime resulting from the traffic. But if we can make the trade unprofitable we may hope that drunkenness will die out with the present generation, and in proportion as by legal restraints and penalties this traffic in the means of damnation can be made less profitable, will the evil it causes be diminished. That where dram-shops flourish, there drunkenness and all its attendant evils flourish, there crime and pauperism prevail, is a fact patent to every observer. That where there are

no dram-shops, we find a happy and prosperous community, is equally true. Frequented by the worst members of the community, their use is to enable men to waste money and time, their tendency to manufacture drunkards and criminals.

The two results of intemperance that have been considered in this paper, the multiplication of criminals and the multiplication of paupers, make the use of and traffic in alcoholic drinks a grave public danger and wrong. The State has an undoubted right to prohibit a traffic that tends to debase the morals, impair the health, and endanger the lives and property of its citizens. *SALUS POPULI SUPREMA LEX.*

PHYSICAL INFLUENCE OF SUNDAY REST.

—I have practiced as a physician between thirty and forty years, and during the early part of my life, as the physician of a public medical institution, I had charge of the poor in one of the most populous districts of London. I have had occasion to observe the effect of the observance and non-observance of the seventh day of rest during that time. I have been in the habit during a great many years of considering the uses of the Sabbath, and of observing its abuses. The abuses are chiefly manifested in labor and dissipation. Its use, medically speaking, is that of a day of rest. As a day of rest I view it as a day of compensation for the inadequate restorative power of the body under continued labor and excitement. A physician always has respect to the preservation of the restorative power, because if this once be lost, his healing office is at an end. A physician is anxious to preserve the balance of circulation as necessary to the restorative power of the body. The ordinary exertions of man run down the circulation every day of his life; and the first general law of nature, by which God prevents man from destroying himself, is alternating night and day, that repose may succeed action. But although the night apparently equalizes the circulation, yet it does not sufficiently restore its balance for the attainment of a long life. Hence, one day in seven, is thrown in as a day of compensation, to perfect by its repose the animal system. I consider, therefore, that in the bountiful provision of Providence for the preservation of human life, the Sabbatical appointment is not as it has been sometimes theologically viewed, simply a precept, partaking of the nature of a political institution, but that it is to be numbered among the natural duties, if the preservation of life be admitted to be a duty, and a premature destruction of it a suicidal act.—*J. R. Farre, M. D.*

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSELL.

WEDNESDAY, January 10, 186-.

I HAVE attended the second meeting of our new Society to-day. The subject under discussion was "Woman's Honesty." It was suggested at the last meeting, and Mrs. Selden was selected to prepare a paper upon it, or to read any thing that she might find bearing upon the subject. She brought Miss Muloch's "Thoughts Upon Women," in which, she said, was expressed her meaning much better than she could do it in words of her own.

The portion that I have extracted, I was particularly impressed by, and led me to think that I was hardly stating my own mind, when, in a former place in my journal, I claimed a higher, more rigid standard of honesty for women than men. My opinion was based upon my recollection of individual instances of women who were just and honest in spirit as well as deed; and this, by the way, is too generally woman's custom, to form her opinions of a whole by her observation of a part, and that, often, a very small part. But to my extract. "I am afraid it is from some natural deficiency in the constitution of our sex that it is so difficult to teach us justice. It certainly was a mistake to make that admirable virtue a female; and even then the allegorist seems to have found it necessary to bandage her eyes. No; kindness, unselfishness, charity, come to us by nature; but I wish I could see more of my sisters learning and practicing what is far more difficult, and far less attractive—common justice—especially toward one another."

In dealing with men, there is little fear but that they will take care of themselves. That 'first law of nature,' self-preservation, is—doubtless, for wise purposes—imprinted pretty strongly on the mind of the male sex. It is in transactions between women and women that the difficulty lies. Therein—I put the question to the aggregate conscience of us all—is it not, openly or secretly, our chief aim to get the largest possible amount of labor for the smallest possible price? We do not mean any harm; we are only acting for the best—for our own benefit, and that of those nearest to us; and yet we are committing an act of injustice, the result of which fills slop-sellers' doors with starving seamstresses, and causes unlimited competition among incompetent milliners and dressmakers,

while skilled labor in all these branches is lamentably scarce and extravagantly dear. Of course! so long as one continually hears ladies say: 'Oh, I got such and such a thing for almost half price—such a bargain!' or: 'Do you know, I have found out such a cheap dress-maker!' May I suggest to these the common-sense law of political economy, that neither labor nor material can possibly be got 'cheaply,' that is, below its average acknowledged cost, without *somebody's* being cheated? Consequently, those devoted to cheapness, when not victims—which they frequently are in the long run—are very little better than genteel swindlers.

There is another lesser consideration, and yet not small either. Labor, unfairly remunerated, of necessity deteriorates in quality, and thereby lowers the standard of appreciation. Every time I pay a low price for an ill-fitting gown, or an ugly, tawdry bonnet—cheapness is usually tawdry—I am wronging not merely myself, but my employee, by encouraging careless work and bad taste, and by thus going in direct opposition to a rule from whence springs so much that is eclectic and beautiful in the female character, that 'whatever is worth doing is worth doing well.' If, on the contrary, I knowingly pay below its value for really good work, I am, as aforesaid, neither more nor less than a dishonest appropriator of other people's property—a swindler—a thief! Humiliating as the confession may be, it must be owned that, on the whole, men are less prone to this petty vice than we are. You rarely find a gentleman beating down his tailor, cheapening his hosier, or haggling with his groom over a few shillings of wages. Either his wider experience has enlarged his mind, or he has less time for bargaining, or he will not take the trouble. It is among us, alas! that you see most instances of 'stinginess'—not the noble economy which can and does lessen its personal wants to the narrowest rational limit, but the mean parsimony which tries to satisfy them below cost-price, and consequently always at somebody else's expense rather than its own. Against this crying sin—none the less a sin because so often masked as a virtue, and even corrupted from an original virtue—it becomes our bounden duty, as women to protest with all our power

More especially, because it is a temptation peculiar to ourselves; engendered by many a cruel domestic narrowness, many a grinding struggle to 'make ends meet,' of which the sharpness always falls to the woman's lot, to a degree that men, in their grand picturesque pride, and reckless indifference to expense, can rarely either feel or appreciate.

I do not here advance the argument, usually enforced by experience, that cheapness always comes dearest in the end, and that only a wealthy person can afford to make 'bargains;' because I wish to open the question—and leave it—on the far higher ground of moral justice. The celebrated sentiment of Benjamin Franklin, 'Honesty is the best policy,' appears rather a mean and unchristian mode of inculcating the said virtue. Another injustice, less patent, but equally harmful, is constantly committed by ladies—namely, the conducting of business relations in an unbusiness-like manner. Carelessness, irregularity, or delay in giving orders; needless absorption of time, which is money; and, above all, want of explicitness and decision, are faults of which no one dare complain in a customer, but yet which result in the most cruel wrong. Perhaps the first quality in an employer is to know her own mind; the second, to be able to state it clearly, so as to avoid the possibility of mistake; and no error caused by a blunder or irresolution on her part should ever be visited upon the person employed.

There is one injustice which I hardly need refer to, so nearly does it approach to actual dishonesty. Any lady who wilfully postpones payment beyond a reasonable time, or in any careless way prefers her convenience to her duty, her pleasure to her sense of right—who for one single day keeps one single person waiting for a debt which at all lies within her power to discharge—is a creature so far below the level of true womanhood, that I would rather not speak of her." Mrs. Selden went on to remark that ladies, particularly young ladies, were often guilty of a vexatious habit, which she thought it not too severe to characterize as dishonesty, that of continual borrowing and never paying; and, as an illustration, told of two young lady friends who frequently visited herself and sisters before her marriage. They borrowed every conceivable article that young ladies could require, postage stamps, paper, pens, ribbons, small sums of money, etc. etc., and when they used the sewing-machine, they seldom thought to supply spool-cotton of their own. Any one of these things taken by itself, was of slight consequence; but, when

considered in the aggregate, made a drain upon their slender purses, which she and her sisters could not endure. One of the ladies thought that Mrs. Selden's view was too strict and harsh, that, if all entertained a similar opinion, generosity and willingness to oblige would be killed out of our natures. Mrs. Hutton, in her gentle, but clear way, talked about the matter so that this lady soon saw it as the rest of us did; and agreed that strict honesty in small matters would encourage rather than extinguish the spirit of accommodation.

January 13.—Henry has had quite an amusing experience in noticing the curious way in which some people live. He was obliged to spend all of yesterday and last night at the house of an Irish family, living near Milburn.

Mrs. Macartey was in a critical state, and needed constant medical attention. One of the neighbors, an Irish woman, in the course of the day, wanted to make a cup of "tay" for the "dochter," but could not find the "taypot." Mrs. Macartey told her where she would find it with the children's worm medicine in it. Henry lost no time in impressing it upon the women that he did not care for tea, that he should not drink it if they prepared it. There being nothing in the house to eat, one of the women made a batch of bread; and she deposited it in the bed occupied by the juvenile Macartey's. It had been just left by them, and the woman said, that there was nothing like a good warm bed to make bread rise very sudden. When she invited the "dochter" to her house to have a "sup o' something," he declined, although very hungry.

January 16.—To-day I was planning my sewing for the coming month, thinking that I would adopt mother's custom of having the most important sewing done always in advance of the season; when I was very abruptly checked in my plans by Aunt Minerva, who said to me, that I was tempting Providence, in reckoning upon having another season to live. This was a new idea to me, as I had grown up with the thought that we must always have our work done ahead of the time of actual need, in order to be able to devote ourselves to immediate emergencies. I paused in my planning, detecting a spice of truth in what Aunt Minerva had said, and thinking it therefore worthy of consideration. I put to myself the question: Am I, working in advance of time, presuming upon the lease of life any more than if I waited until the time of need?

Is it not as true that we know not what an hour may bring forth, as that we can not foresee the events of a coming year? I concluded, after a few minutes pondering, that the right or wrong of such work must be decided by our feelings in doing it, and I tried to explain my views to Aunt Minerva. I soon stopped, however, for Aunt Minerva is like a good many other people in not being able to see that a question has two sides to it. She herself has been buying a supply of muslin, and is now making sheets, etc., preparatory to becoming a deaconess. Of course, she would not see any thing wrong in this, as one is not married every season.

January 18.—What a trouble an unruly tongue is! Madge is at enmity with all of her own family who will quarrel with her; she has one sister in the neighborhood with whom she has not spoken for two or three years, and another sister was glad to get out of the place away from Madge's tongue. Her old mother in Ireland is fortunate in being out of reach of it, but is all the time wishing to come to her children, and writing them letters full of affection and desire to come to this country. The postage of these letters is always unpaid, which causes much disturbance of mind to Madge; for her love of money is quite as great as her curiosity. It is amusing to watch the struggle between these two traits, when she first hears that another letter is in the postoffice for her. Sore are her lamentations over her mother's foolish fondness for writing letters, and she declares that she will not "relax" another one, but her insatiable curiosity to know the contents of the letter always conquers. Madge's harvest-time comes when we have visitors. She enjoys their presence in proportion to the amount of money, or the value of the presents she receives for extra services rendered the visitors. But here is an instance of the balancing of her good and bad qualities. Though very fond of money, and watchful for every opportunity of honestly obtaining it, and often, in word, making a distinction between those who reward her well and those who do not, she never, *in deed*, makes any difference. She is willing and glad to do for those who treat her well, and never thinks of her services a second time. But let any one treat her with superciliousness or assumed dignity, and there is at once an end to her assisting them, except in obedience to her mistress's orders. A good scolding, from one who has the authority to give it, is received with submission by her, and she is invariably the better for it, but she stoutly sets her face against imposition and in-

justice. Very frequently I am obliged to blame her for a fault and show her how to correct it; such corrections she receives with a red face, but no appearance of anger, and she always adopts my suggestions as far as she knows how. With all her rough, incurably Irish ways, she is not impudent, for her prying into the affairs of others comes from a real interest in those whom she interrogates.

Saturday, January 20.—I was hurrying round the house this morning, doing up my extra Saturday work as quickly as possible, that I might sit down with Henry, who was kept home by the violent storm; when suddenly I heard Henry call me from the sitting-room. I found him looking as I had never seen him before, and Aunt Minerva rather *abashed*. Henry drew me down on the lounge by his side, and putting his arm round me, said, "Now, Aunt Minerva, please repeat what you have just said to me." She tried to speak, but the words refused to come. She was such a picture of confusion that I felt really sorry for her. At length, finding that she could not or would not speak, Henry turned to me, and said, "Annie, Aunt Minerva has been telling me that you are so extravagant in your cooking, and some other ways, that you will soon exhaust my means. And this is not the first time that she has complained of you in this underhanded way. I have never replied, thinking that she would perceive from my manner that I would not attend to such talk; but the last time it occurred, I resolved that the next time I would call you in directly." And then, turning to Aunt Minerva, he went on, "Whatever fault you have to find with Annie hereafter must be done in her presence. She and I are both young, and make no professions of perfection. We are faulty, and are together striving against our defects. But I have confidence in Annie's judgment, and do not think she will go far astray in housekeeping matters. She may feel that I have the most entire trust in her in every respect, and that I will never allow any one to even attempt to prejudice me against her." At this stage of our first domestic storm, Aunt Minerva summoned courage to say, "Well, I must say you are making a great fuss about a little matter of advice." Henry replied, "It is not a little matter; the saddest case I ever knew of estrangement between husband and wife was brought about by just such interference as your's. I knew of it when quite a little boy, and the circumstances made a very deep impression upon my mind. The husband and wife were good people, and truly attached to

each other; but the husband had a sister of whom he was very fond, and he at length gave heed to her jealous whisperings in regard to his wife. For many years they were very unhappy. A time of reconciliation and better understanding came, and the wife had some years of comparative rest and happiness before her death, dimmed to a great extent, however, by the recollection of the undeserved misery which she had endured for so many years. Annie can not, of course, expect to spend a life free from trials, but, God helping me, she shall never suffer from want of confidence and love in me." This scene has drawn Henry and myself very near to each other; and it has made me very sorry for poor, discontented, short-sighted Aunt Minerva.

Sunday, January 21.—I have been to-day to see an old lady, who will probably not live many days. She has been a great care and burden to her daughter, a lady about fifty years of age. The old lady is ninety-three years old, and has lived with her daughter, Mrs. Mellen, for the last ten years. She has annoyed her in every possible way, by her suspicion, her arbitrary orders, and her harsh treatment of Mrs. Mellen's servants. Sometimes Mrs. Mellen has succeeded in getting servants with sufficient sense not to be disturbed by the old lady's whims; but she has lost a number of domestics through her means. Mrs. Mellen said to me to-day, "I constantly feel the necessity of self-discipline; for it is very true that without this, we shall end as we commenced. When mother was young, she was always hard with us children—always suspecting us of what we had not done, until very often we became reckless, and did the very things, which had been only suggested to us by mother's continual upbraiding and suspicion." These words brought to my mind, the scene of yesterday, and I thought there was little hope of Aunt Minerva's changing for the better at her time of life.

January 22.—I have just finished reading Carpenter's *Six Months at the White House*, and only wish there was more of it. I was much impressed by the account of the interview between Mr. Lincoln and the Committee of the Chicago Convention appointed to notify him of his nomination to the Presidency. There was something noble and imposing in the man's action when he had the servant girl bring in a pitcher of water for his guests, and in the words with which he served them: "Gentlemen, we must pledge our mutual healths in the most healthy beverage which God has given to man

—it is the only beverage I have ever used or allowed in my family, and I can not conscientiously depart from it on the present occasion—it is pure Adam's ale from the spring."

Very few men can be found, who, in the prospect of an exaltation like Mr. Lincoln's, would hold to their principles with equal consistency. One might trust such a man for any thing.

INFANT FEEDING.—An infant, for which the mother had no milk, and which they were attempting to bring up by hand, was shown to me when a few weeks old. It was puny, weak, and sickly. It always cried when an attempt was made to feed it, and could not hold up its head, which hung on one side from weakness. On inquiry, I found that it was fed on gruel, made of *fine* flour, mixed with unboiled milk, and heavily sweetened with brown sugar; and that latterly, to still its peevishness and cause it to sleep, a small quantity of *rum* was added to this. The sugar was given to prevent costiveness which, otherwise, it suffered from. It was acknowledged that the child was getting worse daily. "Put the sugar in your own tea," said I. "Throw the rum out of the door, and send up your daughter to me immediately for a bowl of whole meal wheaten flour, the same as my own bread is made of." This I directed them to make into gruel, thus: "With a table-spoonful of this meal, and a pint of pure water, make a thin gruel, which should be boiled about fifteen minutes, and then about a pint of new milk fresh from the cow should be added;" the milk being of course unboiled, as before. These directions being followed, and the child being fed accordingly, in a week there was visible improvement, at the same time that red blotches, like those on the face of a drunkard, began to appear on the infant's face. All costiveness had now gone. At the end of six weeks from the commencement of change of diet the flesh of the child was firm and hard, its skin clear and bright, and it was perfectly good-tempered and quiet. Its weight, too, was about double what it was a few weeks before. The red blotches on the child's face, which appeared after the spirit was given up, were to be attributed to its constitution having gained strength by that time from its food sufficient to throw out the poisonous spirit, and they soon went away altogether. The infant is now at least fully as strong as the generality of children of the same age.—*A. B.*

EVERY person should cultivate a nice sense of honor and self-respect.

The Bright Side.

BY FRANCES CARY.

S^O you think, my fair friend, in your beauty and bloom,
I have come to the season of shadow and gloom ;
Where we fear to look forward, and sigh to look back,
And no gain takes the place of the good that we lack.

Ah ! your head is too youthful, my friend, to be wise ;
You are on the wrong side to see things with my eyes ;
You are down in life's valley, and far away still
From the sunshine that lies at the top of the hill.

I am tasting the good that is yours in pursuit ;
You are plucking the flowers, while I have the fruit ;
You know not the worth of life's loss or its gain ;
I see nothing is perfect, and nothing is vain.

You are viewing the future by Fancy's sweet gleams ;
I am living a happier life than your dreams.
Ideals, with feverish longing you grasp ;
I hold better realities safe in my clasp.

The mists and the shadows of morning are done ;
I am come to the side that is nearest the sun ;
And the hills of that country are almost in sight,
Where beyond the last shadow is nothing but light.

I have gained a sure hope, you are troubled with fears—
I can smile at such sorrows as move you to tears ;
I am stripping all foolish delusions away,
You are making your idols, and finding them clay.

No shadows are mine ; I have hope, I have love ;
I have treasures below, greater treasures above ;
And I see where I stand, by the clear light of faith,
On the bright side of life, and the bright side of death !

Cousin Lucy's Story; or, Should Consumptives Marry.

BY MARY ATHERSTONE BIRD.

"COUSIN LUCY, when will you tell me why you are not married? You have often promised to tell me when I was a little older. I am now nearly sixteen; is not that old enough?"

"Yes, love," replied the mild-eyed lady to whom these questions were addressed; "you are, I think, old enough, and thoughtful enough to apply my tale to useful purpose; so I will defer it no longer. Let us go to my favorite seat under the fir trees, and we can then watch the declining sun, while you listen to the old maid's proxy story. Come, the shadows are stretching half-way across the lawn already, and, you know, I have the history of a life to relate."

The fir trees crowned the brow of a gentle western declivity, along which extended the sunken fence which formed the boundary of the pleasure grounds. The slope below was rich with waving corn, mellowing in the breath of a warm July. Farther on, the "hedge-row elms" were here gathered into majestic groups, and there, stretched away in long irregular lines, inclosing fields of every hue presented by a rich soil in a high state of cultivation. The bright tender green where the young grass was springing up after the hay harvest, contrasted with the duskier shade of the pastures, the yellow barley that took the sheen of satin when the soft breeze passed over it, the feathery oats, and the somber bean-field, all studded here and there with patches of the brilliant scarlet poppy.

Bounding the prospect on the right might be seen a portion of the park-like meadow that nearly surrounded the house, dotted with magnificent oaks and beeches; while on the left lay a wide extent of moor-land, glowing with golden gorse and purple heather. The rich landscape swept away, broken by an occasional village steeple, a mass of denser woodland, the picturesque thatched roof and pointed gables of some old farm-house, or the silvery windings of the placid river, until it was terminated by a chain of hills toward whose bold outlines the sun was slowly sinking in a blaze of gold and crimson.

The "smell of dairy farms" came to them, mingled with the thousand luscious perfumes that load the air of a summer evening; while their ears were soothed by the plaintive cooing

of the wood pigeons, the tinkling of sheep bells from the heath, the evening song of the black-bird, and the ceaseless murmur of a hidden brook.

A rustic seat of unbarked wood was placed beneath the ancient firs, and on this Cousin Lucy and her youthful companion sat for awhile in silence, watching the gorgeous landscape. Now Cousin Lucy was by no means the venerable personage she made herself out to be. She was not yet forty years old, and looked considerably younger; her complexion was pale, but clear; her figure alight and graceful; and although the habitual expression of her countenance and of her fine, full eyes, was thoughtful almost to sadness, a sweet, bright smile was ever ready to light them up in sympathy with the pleasures of others.

"There is no romance in my little narrative," she began, at length; "so you must not be disappointed, dear, if you hear of no stirring adventures, no fitting ghosts, nor mysterious warnings. I have had my trials, it is true; but I have the satisfaction of knowing that my soul has been strengthened by them; and that my life has been more useful, and far happier than it would have been had I not borne them with a patient spirit."

"Well," exclaimed Margaret, "it is a comfort to know at the beginning that whatever troubles and sorrows you may have to describe, all will end happily at last."

"Not according to the sense you generally attach to those words, my wilding!" responded her cousin, tenderly caressing the young girl's redundant tresses; "because that implies that the lovers are married, and live happily all the rest of their lives. My story, remember, is to be an answer to your question 'Why am I an old maid?'"

"Yet you always seem happy, dear cousin, though you are so quiet."

"Nay, Margaret, I know not seems. I am happy. And, believe me, there is no happiness to equal that which is inspired by the consciousness of having done one's best to keep within the path of duty. But I must begin my story, or night will overtake us before it is ended. You may have heard that my mother died when I was quite an infant. She had had many children, but of the whole number only the eldest

and the youngest survived the age of twenty years. Now, pray observe how many circumstances, arising from the most lamentable ignorance on the part of those who had charge of her early training, conspired to bring my poor mother to her grave at the age of twenty-seven. She was naturally of a feeble constitution, and this delicacy was augmented by a boarding-school education, under the management of well-meaning ladies who could store their pupils' memories with facts and dates, instill into their minds the most virtuous principles, and inculcate the most orthodox religious opinions, but, alas! knew absolutely nothing of the delicate physical structure that demands an equal amount of watchful care from the true teacher and trainer of human creatures. In the school where my poor mother was placed, the confined air, polluted by the respiration of forty or fifty persons, the want of active, healthful exercise, the tight, stiff stays, the backless forms, and the incessant strain upon the mental faculties, completely undermined the little vigor that she once possessed. Nevertheless, like a forced flower, she flourished precociously for a time. At sixteen she was a woman in appearance and manners; and she had only left school a few months when she married a man who was as ignorant as herself of the grave error they were committing. Within a year she gave birth to a daughter. Six more years passed away, each being marked by the birth of a child. I was the youngest, and, with the exception of my eldest sister, the only one who grew up to mature womanhood. All the others sunk under some form of consumption, that fell disease to which my mother had a strong constitutional bias, and of which she died when I was about a year old."

"Ah! then I understand why you would not marry, dear cousin; you feared that *your* children, if you had any, might die of consumption like your brothers and sisters."

"Exactly. But I was not so fortunate as to learn my danger in time to avert a very painful experience, as you will presently see. In my young days, the study of Physiology, which ought to form an important feature in education, and most especially in the education of girls, was passed by as unnecessary, even by those who professed liberal ideas; while by the generality of teachers it was avoided as something highly improper, with which the purity of the youthful mind ought on no account to be sullied. And thus, for want of the merest elementary acquaintance with the important laws that govern our bodily functions and control

our health, mothers bound up their daughters' figures in unyielding web and whalebone, compressed their lungs, distorted their spines, impeded the action of their hearts, shut them safely up from the free breath of nature, taught them assiduously every fashionable accomplishment, and every artificial grace—all with the very best intentions—but would have been horrified at the indecorum, as well as risk, of a free morning run over a breezy hill, had any votary of common sense ventured to propose such a remedy for the poor creatures' pallid cheeks and wasting forms. While as for reflecting on the effect this false system must produce upon their children's children, that was a thing which they did not consider as coming within the range of their duties. I hope they know better now. Many do so, but still it often strikes me as a singular anomaly that people calculate the extent of land or the amount of money that they will bequeath to their offspring, yet never bestow a thought upon the *health* they will inherit from them. Well, profound ignorance on such matters was the rule when my sister, then about eighteen, married a young man of good family, but no wiser than herself. My father rejoiced at the unexceptionable match, and pleased himself with flattering visions of her future welfare and happiness. In short, every thing seemed to me to smile upon their union, until one evening when I happened to hear a conversation that made a deep impression upon me, though I did not fully understand it till some years later. Our medical friend, Dr. Winter, had been on the continent for several months, and had only just heard of Anna's marriage. There was a social gathering at our house, and the Doctor was chatting with Miss Rumball, our clergyman's sister, and some other ladies—the wedding of course forming the principal subject of conversation.

"'It is a great pity,' said Dr. Winter, sighing deeply; 'her mother died of consumption, and his family is not free from the same malady. They ought on no account to have married. The children will pay the penalty.'

"'But they may not have any children, Doctor,' said one of the ladies—not Miss Rumball, for she, I remember, kept her eyes cast down, and screwed up her features as though she was extremely shocked at something—'there are many happy marriages without children, you know.'

"'That can hardly be hoped for,' he replied; 'consumptive women almost invariably have children very fast.'

"Miss Rumball here cast a hurried, deprecatory

glance first toward them, and then toward me. Mrs. Bland stopped short in something she was about to say, and the Doctor shrugged his shoulders, and walked off, muttering the single word 'stuff!' I could not comprehend why Miss Rumball had checked them, as though they were saying any thing that it was improper for me to hear; so I slipped behind the window curtain (not a very right thing to do, you will say; and I hope you will not suppose I would do so now), so that I might listen unseen to their remarks, after the Doctor was gone.

"What a singular man he is!" said Mrs. Bland, whom I remember well as a warm-hearted but weak-headed woman; "now, for my part, I can see no possible objection to the match; there are youth, beauty, and plenty of money on both sides."

"Oh! I've no patience with him!" exclaimed Miss Rumball, indignantly whisking the crumbs off her silk dress, "it is *shocking*, perfectly *disgusting* to hear human beings with immortal souls talked about in that way! Actually brought down to a level with the brutes that perish! Dr. Winter ought to have been a horse-dealer, or something of that sort, and then he'd have been in his proper element. One would really think, to hear him talk, that there were different kinds of human beings, just as there are of cattle and such things."

"I've often heard him say," replied Mrs. Bland, "that if we took half as much care to improve our own species as we do to improve our horses, more than half the doctors would be obliged to turn farmers."

"Pray, my dear friend, don't repeat such things to me. The man is positively *low*. Only think of his introducing such a subject in the hearing of a child like Lucy!"

"He is rather careless sometimes," said the peace-loving matron, urbanely siding with indignant virtue; "but then he's such a clever creature, one must make some allowance for his odd little ways."

"Oh! clever! I've no patience!" again exclaimed Miss Rumball.

"For many an hour did I puzzle my little brain to find out what all this meant; but I did not find the interpretation till many years had passed. During this interval my dear sister had been blessed—as we all thought it—with four sweet children; lovely little fairies, like living lilies and roses. But her own health began to fail. I had not realized the idea that she was in any danger, when all my thoughts were engrossed by a new object, which excited in my heart a new and powerful feeling. This feeling

was love, and the object of it a cousin; the son of my mother's brother. He was about twenty-two years of age, intellectual, accomplished, in short, a perfect gentleman. He was the only survivor of a large family, and had lived from infancy with his widowed mother in the mildest regions of Italy. Important business at length compelled them to come to England, and it was then that Henry Goring paid his first visit to our quiet home.

"I sometimes smile, and sometimes weep—but oftener both together I think, when I recollect how very happy I was for two months after his arrival. Every object seemed to glow with radiant colors; the perfume of the most familiar flowers had a fresh fragrance; all the sounds and sights of Nature spoke a new and delightful language. Music was—ah! I must not attempt to describe what music was! An air that was familiar then, and is mixed up, as it were, with the dream-like memories of that delightful time, will sometimes return even now, and wander through my brain for days and nights together, and then I sadly live over again my former happiness. But enough of this. One day you will know by experience how delightfully such moons as these roll by.

"As yet, no word of love had been spoken between us. We had looked into each other's eyes, and read our souls there; and we might have gone on in the same way for two months longer, had not Henry been summoned to London upon the business that had brought him from Italy. This brought matters to a crisis. It was just such a lovely evening as this when he first spoke of what was in both of our hearts."

The speaker paused. Her eyes rested dreamily upon the gently waving wheat, and her thoughts were busy with the long-past scene that her narrative had recalled so vividly. Her young companion gazed almost with awe at the motionless, rapt face, and the intense eyes, whose depths seemed to be lighted up by a holy fire. Then with a feeling that her dear cousin's emotion was too sacred to be watched, she looked away, and waited for her to resume her tale. This she did after a few moments, in a low, but calm voice.

"It was agreed between us that Henry should speak to my father the next morning. He did so; and all seemed propitious to our wishes, for my father gave a cordial consent. Another day of bliss, almost too intense for endurance, and then came my first sorrow—the departure of my lover for one whole wearisome month. Well may Moore sing that

'There's nothing half so sweet in life
As Love's young dream!'

"The first love of a girl who knows that she loves worthily, the sacred halo which her pure thoughts cast around her ardent feelings, all make that epoch in life a veritable foretaste of heaven.

"My engagement soon became the talk of the little town. Every body said what an excellent match it was. Miss Rumball, I understood, was perfectly oracular upon the subject; but Dr. Winter called upon my father, with a book under his arm, and after being closeted with him for nearly two hours, went away, leaving the book behind him. I met him in the garden. He stopped; looked earnestly at me for a moment; then his eyes filled with tears; and he passed on without speaking. I felt as if under the influence of a nightmare. I could do nothing but wander about the house and garden, visiting again and again every spot that was rendered sacred by some association with my beloved Henry; and cherishing but one definite idea throughout all the chaos of my feelings, and that was a firm resolve that no power on earth should prevent my fulfilling the promise I had given him.

"My father remained shut up in his study the whole day, inaccessible even to me. The meal-times passed away without his appearing; and as I crept up stairs to the bed at a late hour, I saw, by a ray of light streaming through the key-hole, that he was still watching. A vague presentiment of evil still haunted me; and after I had laid my aching head upon my pillow, the remarks which I had heard Dr. Winter make upon my sister's marriage rushed upon my memory, giving to this foreboding a shape of ghastly terror. My dream of happiness was at an end!

"You may easily suppose that I did not sleep much that night. In the morning I hastened down, anxious to see my father. He was already in the breakfast-room, and a glance at his soiled dress, and disordered hair showed that he had been up all night. I even thought I could detect the traces of tears in his pale and haggard cheeks. He looked at me as I entered, and then turned aside, with an expression of sharp suffering on his face. In the midst of my grief and agitation, that look made me think of Jephthah and his daughter.

"My father was evidently striving to arrange his ideas into words, with which to open some painful subject, when it occurred to me that by speaking first, on the prompting of my sus-

picious, I might spare him the agony of plunging a dagger into his poor child's happy heart, and destroying all her air-built castles.

"It is twenty years since this happened; yet I remember the whole scene as vividly as though it had taken place but yesterday. I hung upon my father's neck, and said, in as firm a voice as I could command,

"'Father, I am prepared to bear any thing you may have to tell me, even though it were that I must break my engagement with Henry Goring; provided,' I added, catching, as it were, at a straw, 'that I am convinced that it is my duty to do so.'

"'Thank God!' he exclaimed, clasping me to his heart, 'and thank you too, my beloved child, for sparing me the trial I so much dreaded. I could not have hoped for this fortitude in one so young. My poor Lucy!' and as he said this, he held me back to look at me. 'This is a severe trial for you, and one that ought not to have been imposed upon you. Yet how could I teach you that of which I was myself ignorant? Read this book attentively, my child. Had I been acquainted in my youth with the subject of which it treats, I should have been spared the commission of two grievous errors. Your noble conduct gives me the assurance that you will help me to avoid a third. May God in Heaven bless and reward you, and strengthen you to bear your burden.'

"And thus we parted at the untouched breakfast-table. With a despairing calmness I shut myself up with that terrible volume, whose pages seemed to be inscribed with my death warrant. Sometimes I felt prompted to close my eyes to its admonitions, and rush madly into the enjoyment of a brief summer-day of happiness; for why, I impatiently demanded, should I be doomed to life-long misery to expiate my parents' error? But calmer reason and my father's solemn words prevailed, and I went on with its perusal. You shall read the book yourself, Margaret, at some future time. It is sufficient for me now to tell you that it explains the laws which govern the transmission of qualities, mental and physical, from parent to child. It shows the immense amount of suffering and disease with which the world is filled in consequence of the frequent disregard of these laws; and how fearfully the sins of those who marry with a strong taint of hereditary disease are visited upon their children, even to the third and fourth generations. I now understand Miss Rumball's outcry against Dr. Winter. She was a good sort of person, but too narrow-minded to understand that prudery is

commonly far more indelicate than straightforward sense.

"Well, love, I must not now stand shivering on the brink of irresolution, as I did when the light of that calmly-reasoning book cleared away the mists which had made the valley of the shadow of death look like a paradise. As I read on I saw clearly the position in which I was placed. The very affection which I gave to my lover, so ardent, so buoyant in its youthful energy, was enlisted to oppose my marriage with him. For what true love would deem its object to the misery of seeing all his dearest ones sinking into an early tomb? Such was not my love; and seeing the path of duty thus strongly marked out before me, I resolved to follow it without flinching. But there was still something more to be done. My poor Henry was deeply tainted with the same fell disease. His father had died of it; so had his brothers and sisters. He must therefore be made to understand that marriage was forbidden to him as well as to me. My own share of the trial was nearly forgotten when I thought of this. Could I have borne the burden alone it would have seemed comparatively light; but he must share it, and that was indeed hard to endure. To have taught him to regard me as a friend, to have beheld him happily married to some one who *might* marry, to help to train up his children, and to rejoice over their health and beauty—all this would have been to me a never-failing source of happiness and consolation. But, alas! the ban was upon him likewise. We were both doomed to the same dreary fate. All that was left us to do, as I then thought, was sternly to pluck out hope from our hearts, and prepare for the early grave that yawned at our feet.

"I could fill a volume with the thoughts and emotions that rushed through my mind during those few hours. But such a recital would be useless. It is enough to say that when the sharp conflict was over, and my resolution firmly bent upon performing the hard task assigned to me, I experienced a degree of composure that surprised myself. It arose from my faith in God's mercy that so great a sacrifice to right and justice would not be made in vain.

"I went to my father's study, to concert with him the best means of breaking the subject to Henry. My poor father was still terribly agitated, but my calmness seemed to communicate itself to him; and when I perceived that, it stimulated me to still greater efforts to preserve my self-control. He was astonished and delighted, and the fervent blessings he called down upon

me, mingled with praises at what he called my 'heroic fortitude,' reflected back upon me some of the consolation I had imparted. Thus I began already to reap the reward of having done that which was right.

"My father advised that I should not write to Henry immediately, but await the arrival of his next letter, as this would give me time to deliberate on the best way of broaching the subject. To inflict this dreadful pain upon him I loved so dearly, was the severest trial of all; but sorrows never come singly, and there was yet another impending over us. That evening we received a hasty summons to the bedside of my sister, her illness having assumed an alarming character. Her husband had carried her to Torquay in the spring, and thither we followed them.

"A description of her illness would add nothing to the usefulness of my narrative, so I will not burden your young mind with it. She died a fortnight after our arrival. There is, however, one painful circumstance which I shall allude to, because it bears directly on the principle I am endeavoring to enforce. This was my poor father's sorrow. He saw his daughter die, and that, one would think, was grief enough; but it was trifling in comparison with the remorse that gnawed his soul for having in the first place, by his own imprudent marriage, inflicted upon her the feeble constitution that would not support the ordinary trials of maternity; and secondly, for having allowed her to commit the same error, by which her life was shortened, and her fatal malady transmitted to her innocent children. It was no alleviation to his conscience that he had acted in ignorance; he continually repeated that he *ought* to have known better. The only drop of comfort that he found in this bitter cup was derived from my patient submission to my own sorrow. To the hour of his death he never suspected what my actual suffering was, for I fortunately possess a good share of self-control, and that enabled me to appear more resigned than I really felt. He knew nothing of the paroxysms of agony that at times prostrated all my energies. They were not of long duration, however, and every day they were of less frequent occurrence, as my resignation became habitual. I may praise myself at this distance of time, my dear, without incurring the charge of egotism. Just as old ladies are allowed to boast of their charms, because I have nothing to do with disinterested sacrifices, heroic self-abnegation, or any thing, in fact, but taking care of my own little self, and rendering such atoms of service

to my fellow-creatures as happen to come in my way. But at the time I am speaking of life appeared a blank—joyless, hopeless, soulless. I felt that I was immolated at the altar of unrelenting justice, a sinless but unresisting victim. The sentence was as definite as it was righteous, and I had no wish to evade my doom, and to reverse it was impossible. Gradually a serener mood came over me, bringing a more genuine submission and less despair. My father also required my every care. He would remain for hours buried in melancholy reverie; and Dr. Winter, a wise student of human character, incited me to redoubled exertion by arousing fears for his mental health. I believe, now, that his anxiety was chiefly on my account, and that he feared I might become insane, and the surest way to make me forget my own grief was to awaken sympathy and anxiety respecting my father. Under our united care, he began to regain his tranquillity and self-possession; but he had sustained a shock from which he never wholly recovered.

"I had heard constantly from Henry Goring while we were at Torquay, and after our return home. His letters were full of gentle and affectionate condolence, but he delicately forbore to make any allusion to our expected marriage. My replies had been brief, for I had not been able to summon courage to write him that decisive letter that would annihilate his hopes. But it had to be done, and delay seemed only to augment the difficulty. However, acting on Dr. Winter's advice, I wrote a preliminary letter, vaguely hinting that our marriage might be deferred longer than we had anticipated, but without assigning any cause for the delay. By return of post came his answer, assuring me he would not urge our union, until grief for my sister's death had so far subsided, that thoughts of happiness would not be incongruous. Thus far it seemed he had not taken the alarm, as we had intended he should. But then followed these words in a postscript: 'On reading your letter again my mind misgives me. Is it possible there can be any other reason for delay beside your late bereavement? For Heaven's sake do not speak to me in riddles, but deal with me frankly.'

"I wrote as he desired, bidding him read the fatal book, and imploring him to divest himself as much as possible from the trammels of passion, and yield to the dictates of right and justice.

"On the evening of the second day, as I sat by my father's couch, watching the first sound sleep he had enjoyed for many a weary night

and day, the door opened hastily, and Henry entered. With difficulty I suppressed a scream that was bursting from my lips, and, rising quietly, with a gesture imposing silence, I took his hand, and led him into the garden.

"Have you read the book?' was my first question.

"I have,' he replied.

"Then,' said I, 'you know what we must do.'

"Alas! I had judged too hastily. Either his feelings were more powerful than mine, or he had not been so well trained to control them. I was terrified at the storm my words aroused. The wildest expressions of love were mingled with anger, despair, bitter reproaches, jealousy, and vengeance on those who had instigated me to such unnatural conduct. He was indeed shaken by a tornado of all violent emotions. He even declared, poor fellow, that altered affection was my real motive, and that the book and its arguments were merely a subterfuge to get rid of him. Very, very dearly and truly did I love him, so you must not think me very foolish, if unaided and weak as I was, my resolution began to quail before his vehement attack. Still, as well as I could, I resisted and argued; then I wept and entreated. He did the same, bursting into fearful paroxysms of passion. Dreading the effect which this powerful excitement might have upon his lungs, I strove to calm him, and was just on the point of promising to reconsider the question at issue, when his voice became husky and stifled; a deadly paleness displaced the brilliant flush upon his cheek; he staggered, and sunk heavily on a garden-seat near which we had been standing. Believing he had fainted, I raised his head, and in doing so my hand was covered with hot blood that was gushing from his mouth. He had ruptured a blood-vessel!

"I dared not scream, for my father's sake, as his reason might be wholly unsettled by the spectacle that poor Henry presented. I dared not leave him, while I ran to the house. I could only support him in my arms, and look wildly around for help. And help was near at hand. Dr. Winter had caught sight of Henry as he dashed through the town in a carriage, and had followed him immediately, to sustain me by his presence and advice, should I require it, or to be at hand in case of such an event as had actually happened. He hastily summoned the servants, who, under his directions, removed the poor sufferer to the bed which he had occupied only a few weeks previously, in apparent health and strength.

"You may be sure that every care was lavished upon the invalid that affection and skill could suggest; but from the first I saw that Dr. Winter had no hope of his ultimate recovery. The intelligence was broken with the utmost caution to my father, whose greatest anxiety was on my account. But when he saw me no less tranquil than before—*paler*, my glass had told me, I could not be—he resigned himself patiently to this fresh affliction.

"It was now the commencement of autumn; during that season, and the following winter and spring, I was a constant attendant upon Henry Goring. His mother shared with me the duties of nursing him. At first she had treated me with coldness, I might almost say with harshness, because she thought I had sacrificed her son to a fantastic and unnatural whim. But when Henry himself, calmed by suffering, at last acknowledged the rectitude of my motives, her manner completely changed, and she became as kind as she had before been stern.

"Toward the end of spring our patient seemed to rally; but Dr. Winter warned me not to be deluded by appearances. Again he sank; and again his mother thought she read returning health in the bright hectic flush; and yet again was she compelled to own that her hopes had been illusory. Amid all these apparent variations, the insidious enemy continued its ravages, and ere the summer was quite gone, my poor Henry slept in his grave. He died—and, mark this, dear Margaret, for it has been my consolation during all these years that have elapsed since that time—his last words were a blessing on me for clinging to the right.

"I bore his loss with patience, for sorrow had become my familiar companion; and thenceforth I devoted myself unremittingly to my father. When he died, which was about ten years ago, I became by invitation of your kind parents a member of their family. And here I am still you see, living very happily, and always prepared for death. I render what services I can to my fellow-creatures, and thereby secure constant pleasure to myself. I am without anxiety for the future, careful of the present, and above all—and, oh, Margaret, think what a blessing this must be! I am free from remorse for the past!

"And now do you at last understand why I am an old maid?" continued Cousin Lucy, with a gentle smile.

"I do, dear cousin," replied Margaret, "but may I ask you one or two questions? Will it be painful for you to say any thing more?"

"Certainly not, love. It must always be a

sad subject, but it can never be a painful one. Ask as many questions as you like; my object would not be attained if you did not perfectly understand all that I have said."

"I believe I understand it all; but I wish to know if you did not feel as though you had been the cause of poor Mr. Goring's accident? I think I should."

"In the first burst of grief I did, but I was soon convinced that I had done right, and that left no room for self-reproach."

"And yet you must have been very miserable when you reflected that you could never have a kind husband to protect you, nor loving children to comfort you; you, too, who are so fond of children?"

"For that very reason how much more miserable should I have been to have seen my children blighted in their youth; or, on my own death-bed, to know that I left behind me some unfortunate creatures whom I had endowed with mortal disease! With what amount of courage could I have met death, conscious that my life had only been an injury to the world—that I had helped to extend misery to unborn generations? Is not my present lonely life preferable to this?"

"A thousand times!" exclaimed Margaret, your poor sister must have thought so too, I think. What became of her children?"

"By very great care they were reared to the age of man and womanhood. Then, one by one, three of them dropped off, and now only one remains—that Raymond Percival, of whom you have frequently heard, who spends most of his time in traveling."

"How do you account for your own escape?"

"In the first place, by having been brought up in a very healthful farm-house, where I was sent during my mother's last illness, and where I remained for several years, running wild like a young colt. Then I always had a fit of sickness whenever I was sent away to school, so I was kept at home and attended a day-school. I thus escaped many things that would have called forth the lurking enemy, had I been subjected to them for any length of time. In after years, thanks to good Dr. Winter's judicious advice, I have been able to keep a careful watch over my own health. In fact, to avoid being thrown a sickly burden upon my friends, my life is one continued course of self-denial. Am I invited to a ball or large party—and you know I am sometimes, old maid though I am—I consider whether it would be wiser for me to accept the invitation, which would afford me

much pleasure, but to do which I must incur the risks attending late hours, heated rooms, currents of cold air, the temptations of dancing, eating ices, and so on; or to stay quietly at home, read, work, and chat, take my biscuit and glass of milk, and go to bed at 10 as usual. In the same way I reduce every thing to this question, *What ought I to do?* I do this not from any great desire to prolong my life, but to preserve my independence as long as possible. I consider it to be the duty of every member of society to keep his own health in the best state of which it is capable, because an unhealthy member is a burden instead of a support to the community.

"Reflect upon this, my dear child, when a little spice of vanity prompts you to wear a pair of pretty, thin boots at a picnic, in dubious weather, instead of less sightly but more substantial ones. 'If I *should* catch cold,' whis-

pered Vanity, 'that would hurt nobody but myself.' But Vanity would mislead you, as she usually does those who listen to her, and try to make you overlook the trouble that your illness would entail upon your family. You would be nursed and tended, while not one other person in the house would be exempt from trouble and anxiety on your account."

"Thank you, dear Lucy, both for your story and your lecture. I have often sinned quite thoughtlessly in the way you speak of, about my dress, and so on, but I will be more careful for the future."

"If you act up to that resolution, Margaret, I shall see that my warning tale has not been told in vain. But come, the sun has just set, and I must not wait for the night dews, thereby, like too many teachers, spoiling a good precept by a bad example.

The Big Bell.

BY GEO. W. W. HOUGHTON.

THE tower lifted by the shore,
 Within a big bell hung,
 And three strong men stood at the rope
 Whenever it was swung.

In storms and tempests it was heard,
 A-crying through the gloom,
 Or in the hour of wild affright,
 And fear was in its boom.

It chanced one day that by that way
 Came Esther, Joseph's wife,
 And by her played he: only babe,
 Her love, and Joseph's life.

He chirruped in his boyish glee,
 And stoned the swooping birds,
 Or called upon the answering cliffs,
 And made them speak in words.

And sporting in the silver waves,
That kissed his nakedness,
He shouted to the mother, "Look,
And see your little Ches!"

"Oh, look, mamma, and see me now!"
She turned to please the child,
And froze with fear to see a wave,
That rose, scowl-eyed and wild.

"O Cheswick, fly! Oh come to me!"
Too late! She gained the strand
To see him swept far, far away,
And watch his sinking hand.

She rent her curls; one look to heaven
The piteous mother sent;
Then struggling up the stony chasm,
Her breathing well-nigh spent;

She leaped within the tower-door;
She seized the mighty coil,
And at the dozen shivering peals
Each laborer dropt his toil.

"Oh woe, oh woe! oh, grievous woe!"
The booming message rang;
"Oh hasten, yeoman! Woe, oh woe!"
It cried, "Clang, clang; clang, clang."

'They saved the boy, they saved the wife,
And still the big bell hummed;
And Joseph bore them to his home,
Nor was the big bell dumbed.

The tower still stands beside the sea,
Within the bell is hung;
But never yet has man been known
Has swung its mighty tongue.

Summer Resorts.

BY REV. CHARLES M. BRIGHAM.

"WHERE shall we go in the summer?" Every respectable mother of a family in the cities asks that question of the head of the family. The question becomes more pressing as the season advances, and the June heats draw on apace. We must go somewhere. We can not swelter during the unhealthy months in these hot streets, in the glare of this fierce sun, reflected from brick walls and stone pavements. We can not breathe the foul vapors, and nauseate in the poisonous smells of the filthy city. Besides, it is unfashionable to stay. All our neighbors go out of town. The Smiths shut up their house; the Browns, prudent people, rent their house; and will not the Jones family lose caste and disgrace their name, if by staying in town, they show that they are poor, or mean, or eccentric? Certainly we must go somewhere, even if it be only for a fortnight or a week. We must go somewhere, even if we might be more comfortable in staying at home. We must make so much of a sacrifice to fashion. So the shrewd mother of the house reasons and pleads, and her lovely daughters, who have visions of brilliant matches, and foreign counts, and officers in uniform, and no end of polkas, in the fascinating throngs of the watering-places, reinforce her plea by their entreaties. Paterfamilias has to yield, while he perhaps curses the folly, and groans over the expense. He must give up his comfortable home for the time, and try the fifth story of a lath-and-plaster hotel, rather than be read out of the circle of the aristocratic world. He must be "out of town" with the rest in the summer.

But where to go? A hard matter to decide. The watering-places, where they drink and bathe, are attractive, fashionable—but then they are so frightfully expensive, and the chance of getting accommodations is so slight! Such dissipation, too! So many adventurers! It is not safe to go there with John and Jane, for there are gambling-houses, and sometimes elopements. All the gain from the waters will be nullified by the late hours, and the late suppers, and the high living, and the necessity of dressing in the latest style. One who goes to Saratoga, and Sharon, and Newport, and Long Branch, and the White Sulphur Springs, must do as the rest do, and not go as an invalid. Invalids are a nuisance in fashionable watering-places. Who

cares for those nice analyses of the draughts from the High Rock, or the Iodine, or the Congress? The water is only a secondary matter at a fashionable watering-place; a morning draught in obedience to custom and tradition, but not a primary reason for seeking this shrine of pleasure. The smallest number of those who engage their rooms months beforehand in the monster hotels think of their morning beverages of mineral liquids, tonic, diuretic, and cathartic. The joy of the "Springs" is not in the flowing fountain, but in the nice chances and the nice people that they shall meet. There are fanatics, no doubt, who persist in going to Saratoga year after year, for the purpose, which they unblushingly avow, of "drinking the waters;" and who boast that they get health for all the year in their daily rule of six tumblers from the Congress Spring for three weeks in the month of July. There are blinded enthusiasts, who dwell fondly on the delights of sulphur water, and insist that no wine makes the heart so glad. But in the fashionable watering-places, the first and the absorbing purpose is pleasure, the pleasure that comes in dissipation and show—not any pleasure which is dependent on medicine, or diet, or regimen. The question is not Where is there a healing fountain? but, Where is the best place to be in summer? The majority of voices will probably decide for the watering-places, if one can afford the expense. The approved order for those who are arbiters in the world of fashion, includes several watering-places in the summer programme. Saratoga in July, Newport in August, and then perhaps some more quiet resort in September. As the Royal Lady of England has her summer-houses in Windsor, in the Isle of Wight, and then at Balmoral, so the leaders of society here would show that they change their summer resorts with the months, and have not fastened themselves in a single place. The newspapers chronicled not long ago the achievement of a fortunate petroleum dealer, who boasted that in four weeks he had visited with his family six different watering-places, in six different States.

But all can not go to the watering-places. Many can not afford it, and some do not like the show, and glare, and jostling of those centres of fashionable dissipation. Where shall the more quiet people go, who would have rest and relax

ation, and freedom, and have it all at reasonable cost? They have their choice between the mountains, and the sea-shore, and the inland farming towns. The mountains are the most romantic, and imagination kindles at the thought of the great swelling masses, and the awful shadows, the snow and the glens, and the caverns, and the unknown monsters, wolves and bears, in their solemn forests. We have fortunately plenty of mountains close at hand, the White Mountains, and the Green Mountains, and the Adirondacks, and the Alleghanies, and the Catskills—not to mention Schooley's Mountain, and the West Point Highlands—and all within a day's ride from New York. To go to the mountains was once a laborious and hazardous enterprise. Now it is hardly more than a short drive. One can almost have a home in the mountains, and do business in the city. The mountains certainly have the first claim upon the denizens of the city, for one summer at least, and they have not wanted loving and saintly demonstrators of their charms. It is putting it mildly to call Murray a "poet" in his description of the Adirondacks; his sketches have all a poet's license. And Starr King, in the pictures of Mount Washington and his companion peaks, has allowed an exuberant fancy full play. Every well-ordered family ought to make one pilgrimage at least from the haunts of fashion to the "shrines" of Nature, and no man or woman can be called "educated" who has not seen the mountains long enough and often enough to catch something of their meaning. It is a shame when the Swiss Alps give to Americans their first idea of the strength and grandeur of the eternal hills. If we have not yet been there, let one summer resort this year be by all means "the mountains," even, if we have to meet discomforts and hardships, bad beds, black flies, midges at night, sudden showers, and rough customers in the guise of guides and landlords. We shall find soon enough that a good many lies have been told about the pleasures of mountain life, but all this pleasure will not prove to be vanity and vexation of spirit.

Those who go to the mountains, however, should make up their minds to do as mountaineers do: to adapt themselves to the situation, and to see what is to be seen there. One who expects to live the life of the city when he is among the hills only makes a fool of himself. We chanced once to meet at Meyringen in Switzerland a burly Englishman, who was beside himself with wrath, because his courier—"confound the blackguard's impudence"—had

discharged him! The courier was quite right, for he said that it would ruin his reputation to travel with a man who was not willing to cross the mountains, but only cared for his dinners in the hotels. In a previous essay, we mentioned the case of a well-known bachelor of Boston, a fixture in the Tremont House, who went up to Fabyan's in the White Mountain Notch in the summer of 1850, just to "rest his stomach." "Bless your soul, sir," said he, "I have no idea of climbing on any bridle-paths." Those who go to the mountains, and mean to get physical or spiritual benefit from their expedition should go prepared to venture in the gorges, to explore the caves, to climb the steepes, and to make martyrs of themselves, if they are short of wind, and stout of frame. If they are sportsmen, they must prove their skill in stalking a deer or bringing down a loon, all the more if they can do it in a thunder-storm. If they are fishermen, they must wade in the brooks, and show their captures of mottled trout. The highest peaks accessible must be scaled, and they must go down in the deep ravines. There is nothing more absurd than the manners of city life in the mountain hosteleries, or the costumes of Broadway on the sides of Kearsarge and Greylock. And half the benefit of a trip to the mountains is lost in the multiplication of urban labour-saving comforts in the wild glens. A railway on the slope of Mount Washington is a great convenience, no doubt, but who that has toiled through those woods and over those rocks, stumbling at every step on the highest ledges, and drenched again and again in "the mountain sweat," would change that experience for the snail's pace of a cramped railway car? We do not go to the mountains to find the ways and luxuries of the Fifth Avenue.

Few care, however, to stay long at the mountains. A day or two, or a week or two at farthest, is enough for most summer tourists. Enthusiastic trout fishermen, like Dr. Bemis, or the painter Harding, may make a long season among the hills, but the rest pass on, when they have fairly fixed the scenery in their minds. Comparatively few, too, go to the mountains a second time, and the passion of such a man as Starr King, who would run up to the mountains in the late autumn, or even in the dead of winter, away from the cheerful fires of Burroughs Place, seems unaccountable to calmer souls. The mountains will only do for those who limit their absence from the city to a fortnight or less; those who mean to stay away longer must try some other resort. And then the "sea-shore" claims consideration. How

delightful, how suggestive, the great and wide sea, so vast, so infinite, so endless in movement, so deep in mystery! Let us go to the sea-shore, where we can look off from morning till night, on the beautiful blue, and see the ships go sailing by, and watch the tumbling billows, and the white caps of foam, and the creeping surf upon the beach, and the fishermen at their toil, and the wheeling gulls in the air, and glory of the sun as he rises from the wave, all fresh from his slumber! Have not the boys read Byron, and the girls read Thalassæ, and shall the head of the house plead against them in his prosaic realism, that there are sand-flies, and dirty seaweed, and the smell of decaying fish, and wretched fogs, and horrible roads, and no shade from the mid-day sun, and a stupid sameness from morning till night? Shall these grumbling objections overrule the thought of the healthy baths in the surf, and the nice boating parties and yacht races, and the capital fishing, not of wretched little brook trout and perch, but of great cod and halibut, and the ravenous blue fish, possibly of the dreadful shark? And the beaches are so handy, too. As the rivers run by all the large towns inland, so the Lord has kindly ordered the beaches near the great cities. Rockaway and Long Branch near to New York. Cape May near to Philadelphia. Nantasket and Nahant beach near to the American Athens. What a blessed thing that this land has such a long sea-coast for the refreshing of its tired speculators and traffickers, where the breezes may blow upon their fevered cheeks!

Sea air, nevertheless, is not good for all constitutions. The damp, salt wind has for some lungs danger rather than tonic help. The sport of bathing may be carried too far, and rheumatism comes out of that leaping in the wave. Even the grand prospect may oppress the soul by its vastness, and weary by its monotony. There are those who insist that they never tire of looking upon the sea, and that it is always new in its play of form and colour. In most cases, nevertheless, those who make that statement are self-deceived, if they are sincere. The human soul ought not to bear such a constant strain, ought to get tired of that eternal heaving of the wave. Even the sailor, whose home is on the deep, longs for the end of his sea voyage; and the passenger counts the days to the end, when the voyage is hardly begun. It is inconsistent that those who find the sea so monotonous and tiresome when it is all around, should find it so delightful and varied when it is seen from the shore for days and weeks. There is real benefit and quickening from life on the sea-shore,

where rest and bracing air are so happily brought together. Yet the sea-shore has not that immense advantage which is often claimed for it. Even the coolness of its air in the season of the dog-star is greatly exaggerated, and there is not much advantage in the breeze from the water when the loss of shade is considered. The mercury marks as great heat by the sea-side as in places inland, and one may find the days of July as uncomfortable in Newport as in New York. When the risks of living at the sea-side are taken into the account, the dangers from slippery rocks, leaking boats, sudden squalls, imprudent bathing, heavy fogs, and necessary exposure, are taken into the account, the balance is not largely on that side as against a home nearer to the field and to the forest. Those who live in the inland cities, in St. Louis, and Cincinnati, and Pittsburg, will do well to get away from the burning heats of their alluvial soils, and the hateful clouds of carbon in their air, to the purer breath of the sea, and its broader outlook; but that is not so needful for those whose home is already in cities by the sea.

The third alternative of those who would go out of the city in the summer, is to find a retreat in some country farm-house, where they may smell the new-mown hay, eat fresh eggs and fresh vegetables, drink pure milk, and have plenty of room for the children to run about. This variety of rustication has the advantage of cheapness; yet in these last years the scale of prices has considerably risen, and now the cost of living in a country cottage for two or three months, even where there are no "extras" to pay for, is not so very much less than the cost of accommodation at the sea-side. The hard working farmers, who barely get a living from their land, make up the lack by their income from summer visitors, just as the owners of Newport cottages support themselves all the year from the rent of their furnished houses in July and August. And charming as these farm-houses are in their rural simplicity, they have their trials. The wet grass in the morning is troublesome. The roads are impassable in rainy weather. There are flies in the day-time, bugs and beetles in the evening, and mosquitoes musical all through the night. Fever may be caught in the fogs. When you would like to ride, the horses are always busy in farm work. The wholesome fare is often scanty, and the cookery is not palatable. The beef is tough, the potatoes are sodden, and the bread is coarse. You have to keep early hours, and go to bed long before you are sleepy, unless you attempt vainly to read by the light of a dim tallow

candle. If you refuse to make confidence with your host and his family, and to admit them to your secrets, you are looked upon coldly, and served reluctantly. The routine of farm life soon loses its novelty, and after you have seen the cows milked, and the butter churned, and the pigs fed, and the chickens in their coop, for a few successive days, these bucolic duties cease to be exciting, and you pine for a more complex and varied life. You find that the farmer's family are very unconscious of the poetic beauty of their hard life, and that they envy the happy dwellers in the cities, and hate their own tiresome drudgery; and insensibly you come to feel the justice of their complaint, and to thank God that you are spared this homely servitude.

There is, however, still another method which some take in our time, which seems to answer the demand of fashion, but does not, after all, make a very important change in the habit of life. Not a few call it "going out of town for the summer," when they only go from a large city to a smaller city, only from the metropolis to the provincial centres, only from comfortable houses on the avenues to less comfortable hotels in the large shire-towns. Paterson and Poughkeepsie are "country places" to the citizens of New York; Worcester and Springfield to the wise Bostonians. It is a curious fact that while these smaller cities are more and more becoming summer resorts for residents of the larger cities, their own citizens are constrained by the same inexorable fashion to go away somewhere for the summer. The law is as absolute in the town of twenty thousand inhabitants as in the city of two hundred thousand or five hundred thousand. In some respects these small cities have the advantage over watering-places, or sea-side life, or farm life. There is more going on in them, more variety, more show of human activity, more to enlist sympathies. They have pretentious shops, which imitate fairly the best in the metropolis. They have easy communication, trains of cars five times or ten times in the day, with newspaper depots, and local papers, and a choice of churches, and the frequent sound of bells, tolling the Catholic Angelus, or the Baptist prayer-meeting, or the funeral procession. In the summer, they are sure to be visited by two or three caravans and circus companies, with their gorgeous chariots, their spirited music, their monkeys and dogs and ponies, and the admiring crowds watching their progress along the streets. There are meetings of citizens, too, which can be attended, political, agricultural, educational; school examinations, school exhibitions, and the like. If you would get the

last novel, there is a library conveniently at hand. If you would have society, it is easy to get invitations to picnics, and clam-bakes, and evening parties, which are always coming up in small cities in the summer months. Indeed, the aristocrats who come into the country, for the summer, in this way may find that they get more excitement in these small cities than in their own homes, where they are so shut in by the throng and press. The contrast of this life with the ordinary life of cities, is not great enough to give the benefit of going out of town.

All these ways of finding enjoyment, and meeting the social demand have reason, though all of them have their prosaic side. There are certain general rules that are applicable, no matter which kind of summer resort any one may choose. The first of these is, to *make the best of what has been chosen*, to get out of it all that it has, and not to expect what it can not give. Grumbling and complaining will not help the matter at all, even if the complaint be well founded. Do not anticipate any more pleasure in your summer home than you get in your winter home, or think that Paradise is to be gained in Saratoga, or Swampscott, or Sudbury, any more than in New York or Boston. Take it for granted that there will be a good many annoyances in this recreation, and that you will have to pay rather dearly for it, as you do for most kinds of pleasure. Mark Tapley's resolution to be "jolly" always, and jolly all the more, when circumstances are unpromising, is a good resolution for any kind of summer resort. Good nature is nowhere more needed or more helpful. Keep your criticism in your breast, until you get back to the safe fastness of the city, where you can relieve your soul without adding to your misery. In the summer, when the light is so brilliant, and the breezes are so soft, we ought all to be optimists; the pessimists on the hill-side or on the sea-shore are at war with Nature. Let the imagination magnify common things into grandeur. Don't contradict the good man, who sees in his acres of ploughed field, his ancient orchard, and his ditched meadow, a landscape fit for a king. If the milk is sour, remember that sour milk was the favorite drink of the Hebrew patriarchs. If the beef is tough, take it as a warning to longer mastication and a wholesome trial of patience. If there are fogs in the air, think of Turner's pictures, and the verdict of the inspired apostle of English art.

2. A second rule for those who seek summer resorts is, as far as possible, to *throw off business cares*. If the head of the firm goes away with

his family, let him leave the work of the counting-house to the junior partners and clerks. If newspapers come, let them be of the kind which eschew details of the markets and the stock exchange, and deal with the lighter gossip of society and amusement. When a city preacher goes in the country for the summer, he had better forget his occupation, not cudgel his brain for a new sermon, and content himself with selection from the barrel. A lawyer at the sea-shore should leave all his writs and law books behind him, even Abbott on Shipping. A physician in the farm-house should abandon Mulberry Street and Ann Street to the pestilence, if the Lord sends it while he is away from the city. And the good mother of the family should not vex herself about the house which she has left, whether it has been entered at night, and the plate stolen; or whether the servants have been carousing there with their friends. If the summer resort be only an hour's ride off, it ought to be practically a hundred or a thousand leagues away from business, away from regular occupation. Of course, it is insulting to preach the Italian *dolce far niente* to the energetic Yankee, or to advise that he let his hands hang down, and empty his brain of ideas. Only he must not keep on in his regular work, if he will get the full benefit of his change of place.

3. And then, no matter what your position in the city may be, no matter how much money you have to spend, *renounce, in your summer resort, the tyranny of fashion.* Do not think of Mrs. Grundy. Wear comfortable garments, without regard to the latest style. Don't take advantage of the leisure hours to spend more time in the intricacies of raiment. Harper's Bazar is not so suitable for the sea-side or the farm-house as Bonner's Ledger. Take it for granted that a dress for the morning is good for the evening, and that it is not needful to shame the lilies of the field, though like them, you neither toil nor spin. Any summer resort which hinders a reasonable freedom had better be avoided. Of course, absolute freedom from social proprieties is neither seemly nor possible, and the denizens of the Fifth Avenue ought not to friek like wild colts in a pasture, when they get out of sight of their artificial civilization. But as much freedom of action and speech as decency will allow, or is consistent with a Christian profession, should be claimed and used. The style of Grace Church, should not be carried into the humbler tabernacles of the village. The most vulgar of all ostentation is the parade of wealth on the country roads, or on the resounding beach. Nature rebukes this foolish display, and

before the great billows, or in the shade of the woods, the millionaire is not more than the laborer. The pine is as tall above them both, and the wave will drown one as easily as the other.

4. *Moderate exercise*, also, is a good rule of summer enjoyment. You ought not to crowd too much into a day, to do too many things, or to see too many things. If you go to the mountains, one mountain a day is enough to climb. Leave to the professional "walkist" the boast of walking fifty or sixty miles in the day. If you go to the sea-side, you need not swim more than half an hour, to get the best exhilaration of the surf. If you are on a farm, it is not worth while to volunteer as journeyman in haying or reaping. The attempt to condense all the exercise of a year into the few leisure weeks of summer is a great mistake. Exercise enough to keep a good appetite and an elastic muscle is all that you want, and not enough to send you tired and lame to bed. Reserve feats of gymnastics for the winter, when they are needed as a relief from the confinement of the office or the counting-house. Even laziness in the country is pardonable, and is by no means a ground of shame or remorse. You can lose several days without compunction, even from works of philanthropy. It is a dreadful confession to make, that you have tramped three hundred miles in fifteen days, and shot eight hundred and sixty-three pigeons, and landed two hundred trout.

5. Another rule is *to stay long enough* in the place that you choose to get the good of it, long enough to see all that it has to show, and to know all its capacities and meaning. The minimum of time perhaps can not be given, for there are places possibly which can be exhausted, in professional language, "done," in twenty-four hours. Alexander Dumas could get enough in that time to make a full novel out of a wayside inn. It is safe to say, however, that any place where you can not comfortably stay at least a fortnight, is not good to be chosen as a summer resort. Less than that time belongs rather to summer travel.

6. But an equally important rule is *not to stay too long*, not to stay after the pleasure has worn out, and time passes wearily, and there is the longing to get back to the city, not to bring on disgust by lingering after the summer is past, and the harvest is gathering. *No quid nimis* is an excellent maxim for summer recreation. It is better to stop before we are fully satisfied than to go beyond satiety, in our view of the hills and the fields and the sea. Sam Weller's

philosophy of letter-writing is good philosophy for this kind of amusement.

7. And finally, with the habit of some great men denying our word, we venture to give the advice, *not to go every year to the same place*, but to vary the resort with the succeeding seasons. Dr. Chapin may go to Pigeon Cove year after year, but a less gifted mortal will find advantage in alternating between the farm and the beach and the hills. A different place in

every year may not be quite wise, but that is better than the same place in every year. In one generation, a judicious arrangement will have given a knowledge of all the mountains, and all the coasts, and all the varieties of inland scenery in the Eastern States, from Mount Desert to the Alleghanies, where a constant return to the same nook or the same cottage would only have strengthened prejudices.

Spirit and Form, or the Relations of the Body with the Soul.

BY REV. PHEBE A. HANAFORD.

An Essay read at a Meeting of the Hygienic Society, at New Haven, Conn., March 25, 1871.

GOD is a spirit, and all forms of matter are embodied thoughts of God. In humanity there is an effluence of Deity. And while ignoring the Pantheistic idea, it is yet proper to declare, in my opinion, that every human soul has so much of divinity in it, that it may be deemed a part of God, just as a child is said to be "bone of the bone, and flesh of the flesh," of its parents. For the lofty mountains, the vast ocean, the rolling river, the beautiful flower, the verdant meadow, the geometric snowflake, the countless specimens of animated nature, all these are God's *creations*. Human beings are God's *children*. Into each He has breathed the breath of mortal life, and lo! at the same instant, each became a living soul, with a career that henceforth runs parallel with God's own existence. Its immortality is consequent upon its ancestry. God's fatherhood is the guaranty of a high destiny, also, as well as of endless being to all his sons and daughters. To claim kinship with Deity is to claim immortal life, ultimate holiness, and consequent happiness. All this may be allowed, and yet many questions may be asked concerning the nature of the Absolute Existence on which all existence depends, and in reference to the relation between Deity and humanity. Spirit and form are perceived and acknowledged to have existence and mutual relation, but that being, and that interdependence, or at least the dependence now existing, have been the great, ever-present, obtrusive mysteries with which the human mind has been always exercised. Classic Greece had its thinkers who pondered on these profound

themes for meditation. Thales, Pythagoras, Zeno, Epicurus, Plato, and a long and brilliant line of thinkers, thought, talked, and wrote of these unsolved problems of mind and matter, of spirit and form. To use Professor Winchell's words: "On the other side of the Mediterranean we hear the same interrogatories resounding from the region of civilization's dawn, in Egypt, and in far off India and China other races have found themselves confronted by the self-same mysteries, and, with equal courage, have demanded from the depths of Nature their solution. These sublime questions have stared with equal steadiness in the face of Greek, Egyptian, Phœnician, Chaldean, Jew, Persian, Arabian, and Hindoo. Perennial problems, omnipresent as mind itself, they have reappeared upon American shores; and we find that the sacred books of the Aztecs yield us a cosmogony and a theogony no less sublime than those of India, Persia, and Greece."

To attempt then to solve the problems of the origin of spirit, or of the union of spirit and form, or to portray fully, the relations of the body with the soul, either as pertaining to the life, or that which is to come, would be presumptuous on my part, and I shall be careful not thus to inaugurate a failure for my untending essay, with its pretentious title. I treat before those mighty mysteries, and leave all such sphynx-like problems to be solved by the light of that day when we shall see as we are seen and know as we are known, content with the Saviour's assurance, "What thou knowest not now thou shalt know hereafter."

My purpose is a practical one. Instead of any philosophical explanation of the relation of the body with the soul, which I should vainly attempt, I prefer to speak of the fact of that relation, and our duty in reference to it. The fact is patent. It is evident, without argument, that souls are united to bodies, and that earth is peopled to-day with embodied spirits. This is God's world, and this fact then must be one of God's facts—and therefore good. Moreover, infinite wisdom and goodness are our surety that the union of spirit, and form of soul and body, is for the human race the best arrangement that could be devised. Regarding, as I do, life here on earth as the childhood of human existence, and earth therefore as a stepping-stone to heaven, and time rightly improved as the best preparation for eternity, I can not but think it important that while we may not fully understand the relations of the body with the soul, we may and ought so far to seek a knowledge of them as to enable us to find the body to be what Paul declared it should be, "the temple of the Holy Ghost," and to assist us to realize in all its beauty of sentiment and fitness of expression, the poet's assertion that

"The more our spirits are enlarged on earth,
The deeper draught shall they receive of
heaven."

In speaking of the soul in this essay, I refer not only to the immortal principle which is the object of religious culture, but to the intellectual powers commonly termed the Mind—for, according to its etymological derivation, and the authority of some of the greatest philosophers, it is the only term our language offers for that essence of being which includes and contains within itself all our intellectual power. Reason and Revelation are not antagonistic, and any thoughts of duty or morality suggested by my theme must be in harmony with a right understanding of the sacred Scriptures, and as one* has said: "The noble lines of Milton may suffice to show that the most fervent and enthusiastic believer in Revelation need not scorn the assistance of those faculties which are inherent to man, as the gift of his Creator.

'Mortals that would follow me,
Love virtue; she alone is free;
She will teach you how to climb
Higher than the spherie chime,

Or, if virtue feeble were,
Heaven itself would stoop to her.'"^{*}

It can not then be amiss to speak of the dietetics of the soul, and such dietetics must be a legitimate theme for the consideration of a Hygienic Society. Without the soul the body is nothing more than so much inanimate substance. A stone knows as much. A bird knows more. Yet without the body the soul could not engage in ordinary employments, or hold communion in ordinary manner with spirits also robed in the flesh. The body is the avenue of the soul, through which she receives and imparts. Is it not all important that the avenue be kept in a proper condition? Is not health for the body desirable that the soul may prosper? Wisdom answers affirmatively both these queries. And divine wisdom suggests the importance of spiritual health that the body may rightly perform its uses. "Keep thy heart with all diligence, for out of it are the issues of life." The duality of human nature must be acknowledged. While we dwell on the earth we are spirit and form—we are soul and body—and each has great influence on the other; both, then should be kept in health, each for the sake of the other, as well as for its own sake.

The will is an attribute of the soul. Kant examined "the power of the mind to master morbid feelings by the mere force of resolution," and left on his readers the impression that will power was health power, or, at least, could be made conducive to health. Goethe declares that he once warded off disease by the power of his will. If we accept the theory of Kant, how much nobler will be the choice, if, instead of choosing to look "pale and interesting" we adopt the words of Schlegel as our motto, "Consecrate thyself and proclaim that Nature alone is venerable, health alone lovely."

Yet the soul and body are not married for eternity. God has joined them together for this earthly life alone, and sometimes, through faults or misfortunes of inheritance, the bond which makes the twain one human being on earth, is very frail. Then there must be the evidence of weakness, and after a time the visible marks of decay. To use the language of Dr. Ernest Von Feuchtersleben, the author of the book on Soul Dietetics, which I have mentioned (and which reached a seventh edition in German, before it was translated into our mother tongue), "Wherever beneficent nature has assisted the efforts of moral cultivation, facilitating the higher development of the individual by a happy

* The translator of "Dietetics of the Soul"—in his Preface.

* Milton's *Comus*.

organization (and has not the existence of moral as well as artistic genius been long admitted, for example, in Socrates, Marcus Aurelius, Howard, Penn?), there the manifestations of harmonious existence will be more evident and more lovely than in cases where the painful struggles of the soul can barely wring a few blossoms from the rude soil of bodily organism. But all the more gloriously will those scattered rays of a higher light break forth as lightning from the depth of night, illuminating the outward form, as formerly the face of Socrates, and verifying the eternal truth of Apollonius—"there is a bloom, even in wrinkles." What then, is beauty, but the spirit glorifying its earthly tabernacle; and what is health but the beauty of its various functions? Where the mind directs a well-tuned instrument we perceive not its glorious perfection from the facility with which it draws forth the harmony of virtue, and the effect appears to us natural; but when we know that it wrings harmonious accord from dissonance, then we deem its action miraculous. And as hidden beauty often bursts forth from the face of a good man in one great and solemn moment, so also may the beauteous treasure of health be won by a single bold resolution. 'Think not,' exclaims the inspired physiognomist 'to render man beautiful without making him better;' and think not, I would add from the deepest conviction, to maintain him in good health, without first making him better."

The truest culture is the harmonious development of the corporeal and the spiritual powers. Soul and body alike need to enter the school of Christ. And when taught there, the soul, as well as the body, will find that it has duties to the souls around, and is as dependent as the body on others. Plato taught that solitude engenders selfishness. It is certainly unfavorable to health, and he will be most likely to have what Horace calls "*mens sana in corpore sano*," who is most active in all the various social duties and philanthropic efforts of the age. Says Whittier, very truthfully, "God is loved through love of man," and the best dietetic rule 'for the soul, or the truest hygienic rule for soul and body, is, I verily believe, that eleventh commandment which Jesus gave, saying, "A new commandment I give unto you, that ye love one another." As soul and body act upon each other, so those who truly love humanity, and labor for its good, must love God; and they who are truly in love with goodness, and grateful to their heavenly Father, also love his children who are subject to the same laws with them-

selves, sharers of the same hopes and fears, heirs of the same high destiny.

Intelligence influences the bodily health of men. Learned men generally attain advanced age. Witness Humboldt and others. Thus argue many philosophers. I believe that civilization has always the effect of reducing the standard of mortality, and hence Temperance societies are of great importance, for "in the elevation of our sources of enjoyment lies the special means by which mental cultivation contributes to the well-being of the body." Continued cultivation of the reasoning power is conducive to life and health, to peace of mind, for a real culture of the soul results in the recognition of God in the laws of his creation. Where there is much conflict between the evil and the good the vital principle must be reduced. Hence, "other things being equal," the calm, peaceful, heaven-sustained soul will have the strongest, healthiest body, and thus the promise of the Beatitude be fulfilled; "Blessed are the meek, for they shall inherit the earth." If I may be allowed to cite a living example, I would point to the venerable and venerated Lucretia Mott, and show in the saintly beauty of her placid face, the realization of that declaration. The ever-active mind, the lofty soul, in that almost ethereal body, has maintained life and health far beyond the promise of her earlier days. She has lived near to God, and so God has been near to her, to strengthen soul and body for its labors of philanthropy and reform.

A writer in The Christian Union (possibly Mr. Beecher himself, who is its editor) seems to hold similar views, and says:

"We all know here and there men and women who seem to be always young. We meet them at certain epochs of their lives, after years of great changes and toils, and various experiences and discipline, we meet them again expecting to find them worn and discouraged—in a measure overcome by the war which they have been waging. On the contrary, they have the mien and port of victors; what we call trouble has made them strong. What is the secret of the clear eye, and the smile around the lips so frank and joyous that it is almost infantile? What is the secret of this unfailing belief in right, of their untiring defense of what men call romance? Is it not because they live on a plane so high that they are able to get at first hand constant supplies of life from that spiritual realm where youth is eternal? The divine essence which we call the soul is, so long as it keeps in communication with this source, independent of change or chance. These men, then, who never grow

old live where they can get a constant influx of life from God. So powerful is that divine energy that one glance of the soul into the realm where are the sources of life will counteract the thousand trials incident to its present temporary improvement. Our bodies must, according to the laws of nature, fall to decay; but blessed are they who keep up such an illumination within, that the building is glorified till the moment of its fall."

The truth is—and I would emphasize this declaration—soul and body are conjoined for man's good, and thus for God's glory, and the union can only be a blessed one, and accomplish the design of Heaven, when we seek moral and religious culture with all the heart. We may be as careful as duty may require in

regard to what we eat and drink; may have wise rules in relation to exercise and rest and keep them; may learn whole libraries of treatises on the art of living well, or the effect of mind on body or body on mind, but more still is required for us to reach the standard that ought ever to be ours:—the stature of perfect men and women in Christ Jesus—knowing and governing ourselves, cultivating our moral and intellectual faculties, and using all our powers in the service of humanity, which is the service of God. Then shall we experience the joy of a healthy union of soul and body, and understand that its joy and peace are a part of the inheritance of God's child both "in the life that now is and in that which is to come."

Food, Size, Climate, etc., as Affecting Longevity.

BY E. RAY LANKESTER, B. A., OXFORD.

ANIMALS which feed on large masses of food, of great concentration—as, *e. g.*, other animals, or special fruits and portions of trees—are longer lived than those feeding on diffused and widely-spread food, as the lower sorts of vegetable growth and decaying material. This we see in the greater length of life of carnivorous and frugivorous animals as compared, *ceteris paribus*, with herbivorous and garbage-eaters. This reduces itself to a case of evolution and bulk; for in the first group it is an advantage to be large and highly endowed, to be swift and powerful, and to secure the whole mass by one effort. In the second group, five mouths will take in more nutriment than one, it being equally diffused; and hence it is better for a given bulk of the species to be divided into five small individuals than retained in one large one. Where the acquisitive power increases more nearly with the bulk, as in vegetables, such a distinction does not hold. It is in accordance with this relation of bulk to food that insects which feed on widely-spread vegetable juices, or similarly wide-spread garbage, are shorter lived than the birds which prey on the insects, or than other insects which are carnivorous; and that the lower animals, generally feeding as they do on diffused food, are shorter lived. Thus the frugivorous apes are longer lived than other animals similar to them in many other matters which are not fruit-eaters; carnivora

generally than herbivora, in the various classes and orders, *ceteris paribus*.

Tertiary aggregation acts in aiding longevity like the construction in five compartments of the *Great Eastern* steamship, if one is injured and lost, the others can go on without it, or even one may survive by itself. The question of tertiary aggregation brings us very near again to the discussion of individuality, which is not within our scope. Remembering what was said at the outset as to this, it is clear that tertiary aggregation acts by merging many individualities into one, and thus improving the chance of continued life.

Social organization is a sort of tertiary aggregation, in that newly-produced individuals do not separate from but remain attached to the preceding generation, supporting and ministering to the life of the older constituents. Thus it is with civilized man. He is supported in old age by the younger generations; the hope of, and confidence in, such support which the younger individuals have, being the strongest bond of society.

Mere size acts in plants and animals both, in rendering them less susceptible to the cold of the wet season, or the winter, and thus protracts life.

The production of woody fiber in plants is a condition of longevity, and any thing directly favoring this may extend life. It enables the

plant to resist breakage by wind or other violence, and protects it from cold. Thus bulbs continue the individual life of an annual flower for many years, and thus the trunks and branches of trees and shrubs live, while the leaves and flowers die. Obviously the influence on age of the development of wood is but a part of the law of relation of evolution and longevity; but it is a special correlation, of very wide application.

SOME EXPERIMENTAL EVIDENCE.

There are some experimental proofs of the influence of generative and personal expenditure on longevity which may be now cited. By preventing plants from reproducing, that is, by cutting off their flower-buds, the gardener increases the bulk and the longevity of some plants; leaves and wood being produced in place of generative products. By change from a warm to a colder climate, this may similarly be effected. The American aloe reproduces and dies in about five years in Mexico; in England it elaborates leaves for a hundred years before flowering. Again, the axolotl reproduces in warm Mexico as a branchiferous amphibian; in colder climates its fertility is diminished, it becomes a salamander before reproducing, thus lengthening life by delaying genesis. It is rarely that we can point to such cases as these, where the diminution of warmth affects sexual development. Usually it will kill the animal or plant experimented upon—as in the case of the mignonette (a shrub in Barbary), and the palma Christi (a tree in India), which both die annually in our severe climate; the longevity of the individual being in these cases diminished rather than the fertility delayed.

The two cases are interesting to compare with man, who is believed to live longest in cold countries. Like the American aloe, as is seen, when it is taken to still colder climates than our own, or like the mignonette in England, man ceases to gain in longevity when a certain limit of cold is attained. Beyond the cold of temperate regions his longevity is probably injuriously affected, as is that of the palma and the mignonette in England, and that of the aloe in regions farther north. The general action of cold lies no doubt in the production of a sluggishness of the chemico-vital changes, which, if carried far, may destroy, but if moderated must extend, *length of life* (at the expense of *intensity*). The coldness of water, together with its diminished power of oxygenation, as compared with atmosphere, is one of the direct causes of the diminished expenditure in aquatic animals, ren-

dering their life necessarily less intense than that of terrestrial forms, and so longer.

In keeping animals in menageries, in rearing pets and domesticated animals, man performs an experiment by diminishing personal expenditure. He frequently does the same in his own case, leading a careless, laborless existence; but there is in this as in other experiments (which are rarely so good in physiological inquiry in their results as natural comparisons) a disturbing cause, for Luxury, "the fertile parent of a whole family of diseases," as Galen termed her, steps in and works against the diminished expenditure. When man in his own person, or in the organisms he interferes with, so far baulks Nature's provisions that the organs become, as it were, rusty through the suspension of that personal expenditure, which is usually necessary to keep up the warmth by oxygenation and to obtain necessary food, then he shortens rather than increases the length of life, disease attacks his victim, and death follows. This is seen exemplified in the case of domesticated animals, which are fattened for eating, and are believed to be short-lived in consequence. It is clearly the case in pets, such as small dogs whose life is shortened by luxury. Hounds are the longest lived among dogs. On the other hand, there are cases in which man, by his care in avoiding expenditure, has lengthened his own and other animals' tenure of life; and it appears, from the little that is known, that experimental evidence does not support the proposition, that longevity is lengthened by diminution of personal expenditure.

SUMMARY.

Hence, in spite of the great complication of the case, we may conclude, on both deductive and inductive grounds, that the high or low potential longevity of different species, as a general law, is necessitated by those conditions of life which necessitate high or low individual development, as the case may be, whether mere bulk, or complexity, or both; that it is directly subject to those conditions which cause personal expenditure to fluctuate, or which affect generative expenditure, being high when these are low, and low when these are high; that these relations interacting and contenting variously according to the special case, determine the potential longevity of the various species of lower animals.

From the intricacy of these relations we may conclude that potential longevity is a very delicately balanced quantity, and that very slight causes may produce great fluctuations in it.

STUDIES IN HYGIENE.

GYMNASIUMS AS MORAL REFORMERS.—

The idea that the gymnasium lately established at Princeton has already become an important *moral agent* can scarcely seem plausible to most of our readers, yet when we compare the Princeton of three years ago with that of the present, no one will deny the fact that there has been a marked improvement in the student character, and that it is in a great measure owing to the influence of the gymnasium.

In what manner then does this elevating influence exert itself? Simply by causing us to spend our leisure hours in the healthful exercise of our bodies, instead of the so-called social games so prevalent in collegiate institutions. A young man enters college for the purpose of study; for a time recitations are well prepared and no absences incurred. Finally he is so fascinated with the popular game of whist, that books are rarely opened, recitations less regularly attended, and chapel, perhaps totally ignored. Now, however, by the erection of the gymnasium, a useful and healthful amusement is provided for all, an amusement that leads us from the haunts of the Devil, and guides us to the narrow way of virtue.—*College World*.

CARE OF CHILDREN'S TEETH.—As soon as the teeth make their appearance, it should be the duty of the mother or the nurse, to clean them morning and evening with a small brush and tepid water, and as they increase in number, floss silk well waxed should be passed between them, moving it up and down a little under the gums, for the purpose of removing accumulations, remembering that food, fruit, etc., left in the mouth and between the teeth during sleep, are the principal causes of their decay. Early and careful attention to the teeth, cleanliness of mouth, temperance in living, and abstinence from acids, are some of the best maxims for the preservation and beauty of the teeth. When children are thus familiarized with the healthy and necessary custom of brushing the teeth, it becomes a fixed habit, and they will find it ever afterward absolutely essential to their comfort. As soon as the child is old enough, give it a tooth-brush, and give instructions for use, and see that it is done often and thoroughly. The brushes to be used should be adapted to each case, neither too soft nor too hard, and so formed

as to clean the teeth without injuriously irritating the surrounding tissues. Brushes for children should not be quite as stiff as for older persons, the gums not having been subjected to as much friction are not so dense. Procure brushes of a medium width, and narrow at their extremity, so as easily to penetrate to the last molars without wounding the cheeks; they should have three rows of bristles, with the handle slightly bent, so as to allow of an easy and graceful motion.—*Dr. Ambler*.

PROTECTION FOR WET WEATHER.—

High rubber boots are very nice for children in weather that is bright over head but wet under foot. I find that one pair serves my little boy through three wet seasons—two springs and one fall—and it is a great pleasure and some profit to him to wade out into the vin-lakes, vin-oceans, and vin-rivers made by rain or melted snow. "Vin" in his "Tench" language, means "dry-away-soon," I am informed.

Rubber boots are indispensable for women who are obliged to be out in all weathers and who wish to preserve good health. I often wonder why we who love the woods and fields do not provide ourselves with costumes suitable for rambling about comfortably. I remember that Mr. Beecher (in one of the first series of "Star Papers," I believe) recommended the Bloomer for such occasions. So did Grace Greenwood in her early *Greenwood Leaves*. But that comfortable costume has fallen into such disrepute among persons who fancy that they already know and apply the laws of beauty in regard to woman's dress, that it requires great courage for a sensitive woman to "face a frowning world," even on a stormy day, in a dress that protects her person without wearying her in both body and mind by the constant care she is obliged to give it.—*Faith Rochester in Agriculturist*.

Women lose half the pleasure of a free, wholesome life by their style of dress. Every woman ought to have a beautiful costume for use out of doors, one in which freedom and grace of motion can be maintained. It need not be a Bloomer, but it should be short, and light, and handsome.

TO PRESERVE THE COLOR OF THE TEETH.

—The way to preserve the color of the teeth is to remove whatever may collect upon them, and thus allow them to possess their natural whiteness and polish. The best method to effect this is with a brush and tepid water, then pass a thread of waxed floss silk between them, to dislodge whatever may have collected on their approximal sides. If these means do not subserve to prevent the accumulation of tartar, we would recommend as the most simple dentifrice, a nice article of precipitated chalk, which possesses alkaline properties sufficient to help neutralise the fluids of an acid character which come in contact with the teeth, and to promote their well-being, as well as the parts surrounding them. The habit which many have of scouring their teeth with soot or charcoal is a detestable practice. The small black grains remain between the necks of the teeth and the gums, and their constant use in many cases, will cause absorption of the gums around the necks of the teeth; and besides all this, they scratch the enamel. This will seem very plain, when we remember that charcoal is used for polishing steel.—*Dr. Ambler.*

MOTIVE POWER IN VENTILATION.—

Ventilation must be accomplished by a motive power. Let this be a lamp or fire, or the wind, which sometimes will not blow, and is then of no value, or a fan, or a ventilating lamp, but in any case have something which will move the current. We must take the air from the tops of rooms that we wish to ventilate, because, if the draught is reversed we have the disadvantage of bringing all the impurities down from above, contrary to the laws of nature, for, though heavier than the air, they will rise by reason of their greater heat, and consequent small specific gravity for the time. But you may say this introduction of hot air below and cold above is not economical. Very true, if human life is cheaper than anthracite coal. But if not, we can have a little more and not destroy life quite as rapidly. The hot and foul air must be taken out and a fresh supply introduced.—*B. Silliman.*

HYGIENE OF THE NIGHT.—A capital form of rest is one that has been most foolishly abused—we mean sleep. Nearly all the men that work well and long have been sleepers. They have a faculty of sleeping. Witness the Duke of Wellington and Lord Palmerston. But, short of sleep, we want more of quietness in social life. Our evening engagements are far too numerous, and our parties are too much of

the nature of public meetings. They have lost all domesticity and simplicity to say nothing of the cost of them, which is itself a care. They are so late as to extend far into the night.

The injurious results of scanty rest are very obvious. They take two apparently opposite but really related forms—excitability and exhaustion. We are fearful and fatigued; hypersensitive and subject to *ennui*. We are exquisitely sensitive to pain and discomfort on the one hand, and uncommonly hard to please on the other.

Neither moralists nor physicians have much control over the faults of our social life. We can only point them out. The remedy for them rests with the public. Will a few influential people who want easily to do an enormous amount of good, dare to initiate a few changes in our social arrangements in the direction of sleep and simplicity?—*London Lancet.*

LIGHT SUN-BONNETS.—It must be an unnatural child, I think, that can enjoy having a close, heavy sun-bonnet tied on its head whenever it runs out to play. Children always prefer light straw hats, and these are more sensible head-coverings for summer than close sun-bonnets. For very small children bonnets are most convenient sometimes, but let them be light and comfortable in shape. The bonnets stiffened by pasteboard slats or whalebones running from back to front away out beyond the nose, so that one can not see right nor left without turning the head, are heavy and worrisome to the children who wear them. There is the same objection to the stiff "shaker." A good sun-bonnet is deeper over the top than at the sides, serving as a shade, but not as "blindens." White sun-bonnets are trying to the eyes, and if used should have a piece of green silk basted in for lining. A corded gingham sun-bonnet, stiffened with thin starch, or one made on a few rattans running over from side to side—deep over the top but short around the cape; is easy to make and comfortable to wear.—*Faith Rochester.*

We might add, that it is well to let children go bareheaded at their play, during such times when it is not too cold or too hot and sunny for them. Exposure of the head to the air is very grateful at proper times.

GYMNASIUMS.—Plato said no republic was complete without its gymnasia. This is true of all schools and more of all cities and towns. The gymnastic hall, well ventilated, lighted and warmed, where the sedentary and

studious, those confined much in-doors both male and female, old and young, can, in appropriate costume, throw off the restraints of a confined life, and take vigorous body-training under a master, with music, is fully as important now as was the gymnasium in the days of Plato.

NATURAL AND ARTIFICIAL LIGHT.—Of all the requisites for a comfortable use of the eyes, none is more important than a favorable and sufficient light; and perhaps none are oftener neglected. Many persons read while lying down, giving more thought to comfort in the position of their bodies than to whether the light falls in such a direction as is adapted for easy vision. Many school-rooms are so arranged as to favor only the teacher, whose desk is between the windows, while a flood of light falls full on the faces of the pupils, whose eyes have no protection against the strong, full glare.

Such a position as will allow the light to fall over the shoulder upon the book or paper is best in reading or writing, especially in the evening, the book being also so held that the eyes are not exposed to a direct reflection from the pages.

When artificial light is used, it should be steady and abundant. Far more harm is done by too little than too much light when the eyes are used for reading, sewing, and similar avocations, and we may well rejoice in the advent of better means of illumination than were possessed by our ancestors. Tradition tells us that tallow candles and pitch-pine splinters enlightened the eager youthful studies of some whom our country has ranked high among her honored names, but we are more fortunate in having for our "midnight oil" the German student's lamp, and the bright gas-jet, or the clear flame of kerosene.

A soft, steady light, such as is given by a student's or a carcel lamp, is perhaps the perfection of artificial light; yet we may regard gas or kerosene as good enough for all practical purposes, if used in sufficient quantity and with burners that do not flicker.—*Henry W. Williams, M. D.*

OFFENSIVE BREATH.—The popular term "bad breath" is a very significant expression for this unpleasant condition. What is more offensive to the acute olfactory sense than a fetid breath? It engenders a feeling of aversion and disgust, which is not readily overcome.

Great care should be exercised in keeping the mouth free from all extraneous substances.

After each meal, a quill, or ivory tooth-pick should be used, to remove any aliment that may have become lodged in the teeth during the process of mastication, and the mouth rinsed with tepid water. Every night previous to retiring, the teeth should be cleansed with a soft tooth-brush and water. As a rule, tooth pastes and powders should be eschewed as harmful agents. If a dentifrice is desired, a little fine toilet soap, or charcoal reduced to an impalpable powder, may be used. This is all that will be required. Decayed teeth are a very prolific source of mephitic breath. As soon as it is ascertained that a tooth is affected, it should have immediate attention from some competent dentist.

Carious teeth are often the source of serious functional and general disturbance. It sometimes occurs that persons with a number of defective teeth are constantly ailing with either gastric or nervous troubles, when, upon a removal of these unsound members, all the unpleasant symptoms promptly disappear.

It may be well to give a word of caution in regard to diet; by irregularities in eating, the digestive functions become greatly impaired, and for want of proper digestion, the aliment undergoes symotic change, during which process noxious gases are evolved, and cause a foul breath. When cases arise from disease, it is either of the stomach, lungs, or the respiratory passages. In these cases a physician should be consulted at once.

Many substances are in vogue to sweeten the breath, and to disguise any unpleasant scent, as of spirits, tobacco, etc. With the vulgar it is customary to use some pungent aromatic, as cloves, etc., but this savors too strongly of the drinking-bar to be used by any but tipplers.—*Dental Register.*

WATERING TEAMS OFTEN.—Horses and oxen at work need water often. The plowman carries his jug of water, or leaves his team to rest while he goes to the house for a drink. But the team works harder than the driver, and probably needs drink as often; yet many teams are taken out early in the field, where there is no water, except in the driver's jug, and worked five or six hours before they can get a drop. Is it any wonder that they are injured by drinking too much when they are led to the spring at noon or at evening?—*Ex.*

Where horses and oxen are fed on dry food and grain with much salt, they need more water than when fed on a mixture of grain and roots, or green grass.

RECIPES FOR WHOLESOME COOKING.

SANDWICHES.

Sandwiches are very useful to put in your bag or your pocket, when you are not likely to be able to procure your usual meal.

No. 1. CHEESE SANDWICHES.—Take two-thirds of good cheese, grated, and one-third of butter; add a little cream; pound all together in a mortar; then spread it on slices of brown bread or gems; lay another slice over each; press them gently together, and cut in small square pieces.

No. 2. EGG SANDWICHES.—Boil fresh eggs five minutes; put them in cold water, and when quite cold, peel them, and after taking a little of the white off each end of the eggs, cut the remainder in four slices; lay them between bread and butter.

No. 3. FRIED EGG SANDWICHES.—Beat some eggs well; fry them in butter as a pancake; when cold, cut in small square pieces, and lay them between brown bread and butter.

No. 4. OMELET SANDWICHES.—Take four eggs; two table-spoonfuls of bread crumbs, and one-half ounce of chopped parsley. After beating the eggs well, add the bread crumbs, then the parsley, and two table-spoonfuls of water; season, and fry it in small fritters, and when cold, put them between brown bread and butter.

VARIOUS BEVERAGES.

No. 1. WATER is the natural beverage of adult animals when thirsty. Man is the only animal that departs from it; and he never improves himself, nor increases the sum total of his enjoyments by doing so. Plain water is the most simple and the best drink.

No. 2. TOAST AND WATER is made by toasting, very highly, a thick crust of bread, or a plain unbuttered biscuit, and then plunging it into a jug of boiling water; the water should not be poured on to the toast, as the latter is thereby broken, and the drink rendered turbid; if the bread is burned instead of toasted an unpleasant flavor is imparted to the water; a large quantity should not be made at once, as it acquires by keeping a disagreeable mawkish taste.

No. 3. TEA is very injurious to some persons, especially to the nervous; in fact, it does the most harm to those who think it does them the most good—who fancy they could not live without it;—that it cures (relieves) the headache to which they are frequently subject. These are among our strongest reasons for not using it. It is just this habit of tea-drinking that produces the headache, though sometimes relieves it for a short time. It contains a volatile oil, which has a peculiar effect upon the nervous system, occasioning watchfulness, trembling, anxiety, and other distressing symptoms, such as sinking at the stomach, etc. It is a powerful astringent. Our recipe is—avoid it!

No. 4. COFFEE, though in another form, and for other reasons, is equally objectionable. It should never be taken as a beverage. It is heating, exciting, and very difficult of digestion. And although the man who is working hard in the open air, with a scanty supply of food, may be able to dispose of it with little inconvenience, it is injurious to the sedentary and commercial part of the community, who work their brains more than their muscles. Here also our recipe is—**REJECT IT!**

No. 5. CHOCOLATE is a nutritious and pleasant beverage, wholly free from causing the effects which tea and coffee sometimes produce in nervous persons, yet not altogether unobjectionable in some cases, as from the large quantity of oil it contains, it is rather difficult of digestion, and therefore apt to disagree with delicate stomachs.

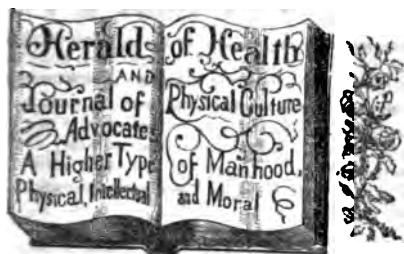
No. 6. COCOA is generally prepared by simply grinding the cocoa nibs, the husks being ground up with the kernels, and those separated in the manufacture of chocolate are added. In the cheaper kinds, the adulteration is carried much further, a very large quantity of potato starch, animal fat, and red ochre being added; some idea may be formed of the extent to which this practice is carried, from the fact that the common kinds of cheap cocoa are sold retail at less than half the price that genuine cocoa nibs command wholesale.

No. 7. LEMONADE.—Lemons furnish two important products for the formation of beverages: an acid juice, and an aromatic stomachic oil, contained in the rind. Lemon juice is a slightly turbid, very sensu- liquid, having a pleasant flavor when diluted; it contains a considerable quantity of gummy mucilage, which causes it to become moldy on exposure to the air; it is capable of furnishing a large number of acidulated drinks, which are useful in allaying thirst, and are valuable for their antiscorbutic properties. Cut in very thin slices three lemons, put them in a basin, add half-a-pound of sugar, bruise all together, add a gallon of cold water, and so well. It is then ready for use.

No. 8. BARLEY LEMONADE.—Put four ounces of sugar into a small stewpan, with half a pint of water, which boil about ten minutes, or until forming a thickish syrup; then add the rind of a fresh lemon as the pulp of two; let it boil two minutes longer, then add two quarts of barley water, made without sugar and lemon; boil five minutes longer, pass it through a hair sieve into a jug, which cover with paper, making a hole in the center to let the heat through; when cold it is ready for use; if put cold into a bottle, and well corked down, it would keep good several days.

APPLES are the bread of fruit, and one of the noblest gifts of God to man. There are at least twelve hundred varieties, and yet are comparatively but little used, and even then often improperly used. They should form a part of our meals, and not merely a condiment.

EDITORIAL DEPARTMENT.



NEW YORK, JUNE, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart; it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as inculcating every article which may appear in **THE HERALD**. They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.

EXCHANGES are at liberty to copy from this magazine by giving due credit to **THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE**.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

THE GOLDEN DECADE.—When a man is young and struggling to gain a proud position in the world against obstacles that present their front to him at every step, he looks hopefully forward to the time when he shall stand on the lofty pinnacle of his ambition, and enjoy for a season the fruits of his triumph. When a man is old and past the age for enterprise, when his eye is dim, and his step feeble, and his thoughts vague, he looks sorrowfully back to the days when he was young and strong and valiantly striving to make a name, build up a fortune, and achieve a success. The young look forward, the old look back, and it is an interesting in-

quiry at what age in life are men and women at their best. Dr. Beard has been discussing this question in a series of able articles under the head of "The Future of American Colleges" in *The College Courant*. He has taken the biographies of eight hundred of the most distinguished persons who have lived in all ages and countries, and tabulated the time of life of these persons when they did their best work, making the average age of the list the age when man is at his best. Not to misrepresent him, we give his conclusions in his own words. He says: "The mean year of greatest productiveness for all classes representing over eighteen hundred dates in the lives of eight hundred individuals, is thirty-eight years and fifty-two hundredths. This may be regarded as the mental prime of life, or from five to ten years younger than has been supposed." We do not propose to find fault with these statements. For averages they are probably not far from correct, though, in individuals they will vary greatly from this. For instance, according to Galton in his recent work on *Hereditary Genius*, the two hundred and eighty-six Judges of England, between the years 1660 and 1866, received their appointment at the average age of fifty-seven, and their average age at death was seventy-five, most of them dying as Galton says, "in harness." It is not at all likely that the best work of these men was made before forty, if, indeed it was before fifty. But then, Judges are tough men with sound digestion, and this condition of body would tend to prolong the average time of greatest productiveness. On the other hand, Generals do their greatest work while quite young. Alexander the Great began his career at twenty, and ended it at thirty-two. Bonaparte was made Emperor at twenty-six, and many we might name were equally young while old Generals rarely succeed in great campaigns, unless they have young men to execute

their orders, as was the case with the great German General Von Moltke, aged seventy, who carried forward with such signal success the late sad war between France and Germany.

But not to dwell longer on this point, let us return to Dr. Beard's article, from which we quote a few brief sentences, as follows :

"The golden decade is between 30 and 40.

The silver decade is between 40 and 50.

The brazen decade is between 20 and 30.

The iron decade is between 50 and 60.

The tin decade is between 60 and 70.

The wooden decade is between 70 and 80.

Seventy per cent. of the work of the world is done before forty-five, and eighty per cent. before fifty.

The golden decade represents about twenty-five per cent. more dates than the silver. The difference between the first and second half of the golden decade is but slight. The golden decade alone represents nearly *one-third* of the work of the world.

The best period of fifteen years is between thirty and forty-five. Over one thousand dates are found between twenty-five and forty-five. The advantage of the brazen over the iron decade—of twenty and thirty over fifty and sixty is very striking, and will cause surprise.

There is considerably more work done between thirty and forty than between forty-five and seventy-five."

Without attaching too great importance to these statements, we may infer that they approximate toward the truth, and, if applied to each person born, would do more than justice to all. And the question which most deeply concerns THE HERALD OF HEALTH is, "How can men and women be maintained at their best longer, so as to make the golden age last from thirty to sixty, or seventy, instead of from thirty to forty, as now. We believe it can only be done by improving the health of the people. The golden age ends when the body fails to perform its functions with great vigor. It lasts over the time allotted to the silver, brazen, iron, tin, and wooden ages, if first-class health lasts

so long. We have long tried to teach in this magazine the doctrine that old age should not mean decrepitude, deafness, blindness, and a condition even worse than the wooden age, and none of Dr. Beard's conclusions militate against this. He states what he finds true. We state what ought to be true. What greater work can men do than to help make the golden age longer, to make it cover the whole of life even, and to reach into the life hereafter, when eternal youth shall be renewed. In the next HERALD OF HEALTH we shall present some of the best methods of bringing about this result.

HOW TO ABOLISH WAR.—Just so long as aggression continues, so long war must continue; and the only way to abolish war is to abolish its cause. Teach men and nations to refrain from aggression, and the work is done. I see no radical cure for this stupendous evil of war except in the destruction of its causes; and I would fain concentrate my efforts, however feeble in this one direction. When monarchies have everywhere given place to republics—when standing armies are everywhere disbanded—when the lust of conquest yields to the peaceful emulation of commerce and home development—when men are sufficiently educated to despise that passion for "glory" which has been the bane of humanity for thousands of years—when the sentiment of human brotherhood has become so universally diffused as to bind all nations into one common family—when respect for equal rights has become so deeply rooted in human hearts that to do an unjust act is more disgraceful than to suffer it—in a word, when the spirit of True Religion shall embrace the globe like an all encompassing and life-giving atmosphere, then, and not before, will war be done away by the cessation of a aggression of nation on nation, and man on man.—F. E. Abbott.

We think that wars will be less frequent when the carnage of battle becomes so great that few lives will be saved of those who go to battle. The French accomplished nothing with

their fleet in the late war with the Germans, because they dared not approach the German coast, which was so well protected by torpedoes that to do so would have been certain destruction. Let land forces be able to destroy an army at once, and war by land will be too terrible to indulge in, especially when all the disputes for which people fight can be settled by arbitration. It ought to be a disgrace for two nations to go to war, without first exhausting every resource for settlement of disputes by the wise men of the world.

HOW A CENTENNARIAN LIVES—LETTER FROM REV. CHARLES CLEVELAND, ONE HUNDRED YEARS OLD THIS MONTH.—Last month we published an interesting letter from William Cullen Bryant, one of the oldest and most respected of American editors and literary men, showing in detail something of his habits of life, so far as they relate to exercise, food, sleep, and occupation. This letter has been republished from *THE HERALD OF HEALTH* far and wide. The following letter from Rev. Charles Cleveland of Boston, a city missionary, and long known as Father Cleveland, who will be if he lives, one hundred years old in June, will also, we are sure, be read with great interest.

"DR. M. L. HOLBROOK—My Dear Sir: In answer to your request for information regarding my habits of life, you will please accept the following remarks, which are given with much pleasure:

1. My time of retirement is at an early hour, not beyond 10 o'clock, and of rising as soon as awake, and before the sun, *throughout the year.*
2. At meals my food is simple and nourishing, avoiding whatever may be regarded as luxuries.
3. My drink at the table is 'Golden Ale.'
4. I taste no spirituous liquors.
5. Tobacco I abhor in all its forms as I would poison, persuaded that its use hath been as an harbinger to 'strong drink,' which has slain its thousands and tens of thousands.

Thus, dear philanthropist, I have given you

my 'habits of living,' and would just add that, preserving a conscience void of offense toward God and man, my sleep in its season is undisturbed and refreshing.

Wishing your *HERALD OF HEALTH* all the circulation it so richly merits,

I am, respectfully, yours,

CHARLES CLEVELAND."

THE VALUE OF A CLEAN MOUTH.—One of the simplest means of preserving the teeth consists in cleanliness of the mouth. The first thing after rising in the morning, or from a meal, should be to cleanse the mouth thoroughly with tepid water. It is the custom in some parts of England and France, to rinse the mouth with warm aromatic water after eating. It is well to remember that this precaution not only tends to keep the teeth clean, but to clear the voice of those about to sing or converse. By cleansing the teeth three times a day regularly, the formation of tartar is not only prevented, but such particles of food and other extraneous matter as lodge about and adhere to them, causing irritation and inflammation, are by this means removed. The fermentation of vegetable substances in the mouth produces, indirectly, sulphuric acid, animal and nitrogenous substances producing nitric acid. These vitiate the fluids of the mouth and help the teeth on to certain decay. Attention to cleanliness of the teeth in early life, can not be too urgently insisted upon, for it is thus that the foundation of sickly teeth is most frequently laid.—*Dr. Am- bler, Dental Surgeon.*

We have heard of a man in New York who has had over three thousand dollars' worth of dentistry work done in his mouth. Now we do not believe that cleaning the teeth will always preserve them from decay; yet it will do much, and even if we do not have to pay three thousand dollars to repair them, we may have to pay many hundreds, which a little care would save. The teeth should be examined once a year by a good dentist, and all repairs made that are necessary. The best dentists now rarely extract a tooth. It is wonderful how

they will save even those in the worst stages of decay.

WHEAT-MEAL FLOUR.—Good, sound, fresh wheat ground in a grist-mill forms the best flour for making family bread, but this can not always be obtained in cities. Millers are quite apt to grind into "Graham meal" their poorest wheat, such as will not make white, sweet flour. For the difficulty you mention, bread formed of two parts of sweet flour and one part of bran is excellent. A large part of the obstinate cases of constipation can be wholly or in part removed by a free use of bread prepared in this way. The bread is really delicious when well made. Some manufacturers prepare a cleaned bran for dietetic purposes which is very nice."

The above we clip from *The Journal of Chemistry*, and will add that for years we have found it impossible to get good Graham flour in New York City, for our family of one hundred persons, and are obliged to have it made for us at first-class mills in the country, where good wheat can be obtained. One might as well live on sawdust bread, as on that made of the coarse flour obtained in the city, while a good article of Graham flour furnishes delicious food.

CHLORAL POISONING.—Cases of poisoning from chloral are reported in a great number of the medical journals, both in Europe and America. The extent to which this new drug for producing sleep is used is wonderful. Tons upon tons of it are made by the chemists to meet the demand, and thousands on thousands of people take it without advice, and with little or no knowledge of what the result may be. It is bad enough to swallow drugs by advice of doctors, but to swallow them whenever in the mood of it, doctor or no doctor, is worse, unless the person is over forty years old, when he is supposed to be either a physician or a fool. If he is the former, he would rarely swallow even his own remedy; if the latter, perhaps it does not matter if he is poisoned and put out of the way.

THE NORMAL INSTITUTE for the Training of Teachers in the Dio Lewis System of Physical Education will hold its Annual Session this Summer in Boston, from July 12 till September 1. With Dr. Dio Lewis, Prof. F. G. Welch, Prof. E. P. Thwing, and Miss E. P. Thwing as managers, a great and good work will be accomplished. This is a most worthy cause, in which many might engage with permanent profit to health, pecuniary profit, and success. A well-trained teacher is sure to meet with success, as the demand is always good. This can be taught without detriment to other business or teaching. This institution offers greater advantages than any other, with the same expenditure of time and money. See advertisement in this number.

CLIMATES FOR INVALIDS.—The *Christian Advocate* in speaking of Mr. Bill's new book "Climates for Invalids," says: "Among the multitudes of worthless story-books that find their way to an editor's table, it is refreshing to meet with an occasional volume of real worth. Such a one we have in this sketch of the great Northwest, for which Minnesota stands as the representative. It unites the easy freshness of a tourist's sketch-book with the solid value of the geographer (including in his view everything belonging to the place), the gazetteer, and the statistician. It is a book to be read both for the valuable information it gives, and for the pleasure its perusal must afford."

A HYGIENIC SHOEMAKER WANTED.—The Editor of *The Woman's Journal* published in San Francisco, California, offers to give free advertisement to any shoemaker who will settle in that city, and make shoes as follows: "Any one who will in San Francisco manufacture shoes for ladies' wear a good article of calf-skin shoes with low, broad heels, material and workmanship such as will insure comfort, warmth, and dryness to the feet, can have free advertisement of the fact to the extent of our circulation."

Such a shoemaker would be most welcome anywhere.

How to Treat the Sick.

HOW I CURED A MAN IN A DECLINE.—

In a former article I described my search for a grand cure-all for the ills that afflict humanity, and my numerous and grievous disappointments. In this I propose to write in a more cheerful strain, and give a brief account for the benefit of unprofessional readers of some little success I myself have met with, in the treatment of disease.

While in Florence spending the winter, a great many years ago, I made the acquaintance of a young American, whose name was—well, I will call it Myers.

He had been living in Italy for several years, devoting himself to the growth of a long nail on the little finger of each hand, learning an affected way of speaking his mother tongue, and what was better and went far to make up the deficiencies of the above, to making himself generally agreeable and useful to any whom he could serve, especially of his own countrymen.

I was green, as a matter of course, for I was not born in Italy, didn't know the language and didn't care to know it, and his acquaintance with the customs of the country was of great service to me, and I soon came to like him in spite of his long finger-nails and affected speech.

It was a pleasant party of Americans that gathered in Florence in the winter of 1859-60; and these, together with the permanent residents of the same nationality, with a sprinkling of English, afforded the materials for as delightful a social gathering as it has ever been my lot to mingle with. Myers was always present at these, and always performed a mild part well. If there was a question of dress or of etiquette, he was the umpire. Historical questions soon carried him beyond his drift, but as regarded the fashionable life that was then moving in that beautiful city and gathering twice a week to listen to the music and wit-

ness the display of the gorgeous equipages, he was *au fait*.

But suddenly in the midst of our festivities he dropped out of the circle. He was first taken with a severe fever, and when it left him he failed to rally, and seemed to be running down with quick consumption, or something of the kind, causing his friends a great deal of uneasiness. Watchers were appointed for every night and some of his acquaintance took care of him during the day. He grew worse, and the case seemed doubtful.

Not having been accustomed to the care of the sick I simply offered my services as day nurse, was accepted, and one afternoon was duly installed in a large room, at the head of two flights of stone stairs, in one of those old Florentine palaces, on a narrow and dingy street, as the nurse of my sick friend, whose life, or death perhaps, depended on the faithful discharge of my duties. I felt the responsibility, and was prepared to fulfill it to the utmost of my ability.

A small fire made out of three mulberry sticks was burning in the little pottery fire-place, as I took my station in the sick-room. It hardly seemed sufficient, and with something of an American extravagance in the matter of fuel, I piled on the mulberry till the whole room was in a cheerful glow. An ominous roar from up the chimney, and the falling of soot attracted my attention, and led me to suspect that perhaps I had been rather overdoing the matter, in fact that I had set the chimney on fire. "Dusty old place; it probably hasn't had a good cleaning out since the time of the Medici; let her burn," I said, as I looked at my patient, who seemed to be sleeping soundly, and took up The Galigiani.

The roar soon disturbed Myers, and he asked sepulchrally, "What is the matter?" "Oh nothing," I answered in my most assuring tones, except that your old chimney needed

cleaning, and I thought that this afternoon would be a good time to burn it out."

"What shall we do?" he groaned.

"Do? why do nothing; only keep quiet. It is one of the wise customs of New England, where I was brought up, to burn out the chimney every year, and I propose to introduce it in this city of dirty flues. Hurrah for New England, and her enlightened institutions!" I said, with as much enthusiasm as the state of my patient's nerves would warrant.

Myers answered with a groan about the police. "But what have the police to do about it, I would like to know? Now just don't trouble yourself, it will all be right in a few moments."

But now a stir began to be heard on the other floors—these Italians are the most easily frightened of any people in the world, and in no case will they suffer a chance for a first-class excitement to pass unimproved. Up comes our Padroni, trembling with fright. I told him in good plain English that there was nothing the matter, and there was no need of disturbing a sick man, and making a fool of himself.

Then a roar in the streets below. Some of the small boys had probably caught sight of the smoke, and they will have up all that crowd that spend the day lounging on the banks and bridges of the Arno presently. No matter, let them come.

And now, clank, clank, up the stone stairs is heard a measured tread, a sword-scabbard striking the stair at every step. Who is this? I wonder. Perhaps, after all Myers was right, and the police are out after that fire. A knock at the door, and then a rattle. I open, and there sure enough is the Chief of Police, uniformed, booted, and spurred. He demands admission. I tell him that it is impossible, that my friend is very sick, and that the flue had already burned out; but all in vain, in he must come. He looks the room all over, then goes up stairs, and returns with a wise and determined expression of countenance. He had as good an eye for a job as a New York Alderman evidently, and this chance must not be lost. A hole must be cut through the ceiling, but first

Myers must be removed. I was in consternation. I used all the Italian I could muster, as well as some good, square English, but it was of no use; the sick man must be got out at once; but where? There was no place but a vault-like room at the other end of the hall, tile floor, stone walls, no fire-place, and the room unused for perhaps a score of years. How was it to be made safe for a sick man, short of a week's preparation?—and there wasn't ten minutes.

I got a huge cauldron of coals, charcoal of course—these Italians get so used to it that carbonic acid gas don't seem to hurt them—set it in the middle of the room, as a heating apparatus; then bundled up poor, groaning Myers, and brought him in without much ceremony. "Alas! alas!" said I, "my dear friend, after all your kindness to me, that I should be the death of you!" I felt like jumping into the Arno, only it was such dirty water. I concluded I wouldn't, but went home to my lodgings on Via Maggio instead, feeling very much as if I had been guilty of a first-class manslaughter.

But what do you think? All this mistake was one of those by which rare secrets are discovered. This fire, and excitement, and rough handling, and damp room, was just what Myers needed, and he began to get better, made up his mind he had been sick long enough, and in a week was out, as mildly happy as ever. And now I wish to give this prescription to the world without charge. For a good-natured, effeminate fellow in a decline, set fire to a chimney, if you have a very dirty one handy, and if not, do something else and make him dig out in a hurry, and it will do him more good than physic, and if dexterously managed with damp room and charcoal accompaniment, is warranted a sure cure.—*Simple Simon.*

CARE OF TEETH.—Put a piece of quick-lime the size of a walnut in a pint of distilled water. Clean the teeth frequently with this fluid, washing the mouth well with clean water afterward. The application will preserve the teeth and keep off the toothache, and will harden the gums.—*Correspondent of English Mechanic.*

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Treatment of Tetter.—“Having heard the Turkish baths recommended as a cure for skin diseases, I write to ask your advice as to trying them to cure tetter, which has troubled me for some time, appearing on my hands. If you will give me your opinion as to the length of time that would be required, and the expense attending the treatment, you will oblige.”

Tetter or Herpes is an eruptive disease of the skin caused by acrid bile and retained excrementitious matters in the blood. The treatment should be directed especially to the purification of the blood. The Turkish bath is the most effective agent for accomplishing that purpose. From one to two months treatment with the Turkish bath is usually sufficient to effect a cure. For terms and other information send for twenty-four page circular of the New York Hygienic Institute. For home treatment, where the Turkish bath can not be obtained, the wet-sheet pack may be substituted. The frequency with which it can be taken with advantage may vary from once a week to once a day according to the strength and reactive power of the patient. The diet should be plain and unstimulating—the larger the proportion of fruit and vegetables the better. Pure air and out-door exercise should not be neglected.

To Prevent the Hair Falling Out.—“Do you know of any thing that will prevent the hair falling out? Mine has been coming out for nearly a year. I have tried a great many things, but they have not done me much good. I am using bay rum and borax now. Are they good?”

Keep the hair cut short, and the scalp scrupulously clean. Leave bay rum, borax, and all “hair invigorators” with the druggist. Wet the head with cold water two or three times a day, and give it a thorough rubbing with the fingers afterward. The more the head is uncovered, whether in-doors or out, the better. Air and sunshine are as necessary

to the health of the hair, as to the health of the system generally. Air-tight hats are an abomination. They keep the scalp heated, and keep the air and light from coming in contact with it. Many cases of falling hair could be cured by simply not wearing any covering upon the head at all, and being out of doors a large share of the time. Feather pillows should not be used to sleep upon. They are too heating. Undue mental activity tends to produce falling of the hair. Where this condition exists, the mental effort must be restrained, and more physical exercise taken. The better the digestion, and the more perfect the general health, the less liability to the loss of the hair; consequently careful attention should be paid to the observance of the laws of hygiene.

Epistaxis, or Bleeding from the Nose.—“What is the cause of bleeding of the nose? How can it be prevented or stopped?”

This occurs most frequently about the period of puberty, when there is usually a greater tendency to plethora than at other times. It can be prevented by keeping the depurating organs, the skin, bowels, and kidneys, in an active condition, by plenty of exercise, and by guarding against eating more than the system requires. It can usually be stopped by bathing the nose in cold water, and sniffing cold water up the nostrils. Care should be taken to keep the head well elevated. In connection with this, a hot foot bath is useful. In severe cases, the nostrils may be plugged with lint, or a soft sponge. When the hemorrhage is from the front part of the nasal passages, firm pressure with the thumb and finger will generally stop the flow.

Reading After Meals.—“Can any harm result from reading any thing interesting immediately after taking one’s meals?”

Reading that simply interests without taxing the mind is not objectionable, but any thing which requires much mental effort should be deferred for an hour or two.

How Much to Eat.—One of the questions oftenest asked me is: "How much shall I eat?" It is a question which each one must answer for himself. The best general guide in this matter, is to avoid eating enough to make you feel dull and sleepy, or to produce any unpleasant sensations in the head or stomach. If such feelings are experienced after meals, you may know you have eaten too much, and that you must eat less thereafter. If, as is the case with many persons, you can not control the amount in any other way, and stop when you have eaten enough, you should measure out the amount you are going to eat, and put it upon your plate before you begin, and never allow yourself to be tempted to take any thing more. There is very little danger of not eating enough. There are such cases, however, but they are confined to the class of persons who lead a sedentary, in-door life. If such persons will change their mode of life, and take as much out-door exercise as they are able to, their appetite will return, and they will soon eat a sufficient quantity.

Age and Youth Sleeping Together.—"I am about forty-eight years old and of feeble constitution, probably induced by many indiscretions. I am very thin in flesh, and have been for twenty-five years. I am colder than most persons, and have cold feet habitually. I suppose it would be said that VITALITY is nearly exhausted. I am active, and do light business all the time, but can not stand the cold, and could hardly sleep alone in this latitude in the winter. I slept this winter with my son of five years. He is warm during the fore part of the night, but usually cooler toward morning. I would ask, Is it good, or bad, for the boy to sleep with me? Also, would Florida be a good climate for me? I would like to go there."

You will injure your son very much by sleeping with him, in your present condition of health. It is bad for children to sleep with elderly persons, even if they are strong and healthy, but to sleep with them when weak and diseased, is doubly injurious. If you can not keep warm of yourself take a bottle or two of hot water or hot bricks to bed with you. You had better go to a warmer climate, and Florida is one of the best places you can select.

Swelled Knee.—"I have upon one of my knees a bunch, or a kind of swelling, which, if on the leg of a horse, would probably be called a windgall. It feels and looks like it, is full of water, and covers the entire knee-cap. It has been about three weeks since I first noticed it, and has been growing ever since. My knee feels a little weak and tender, but does not pain me very much. My work has been such that in order to save my back, I have frequently got on to my knees, and a bruise, or a strain might perhaps have caused the difficulty."

The treatment should be such as to keep down inflammation, and promote absorption. Gentle rubbing and manipulation, alternate hot and cold douches, exposure to the direct rays of the sun, sweating baths, and cold covered compresses are the most important remedies.

Shaving.—"Is it injurious to shave the face? If so, what are its effects?"

The beard was evidently intended to be worn as a protection to the lower part of the face, and the neck, and, it is said, and is doubtless true, that those who wear beards are much less liable to colds and sore throats than those who do not.

Gout or Swelled Neck.—"Please inform a subscriber through the columns of THE HERALD of the cause and cure of swelled neck."

An answer to this query will be found in the June number of THE HERALD for 1870.

LEADERSHIP.—Where nature has marked a man out for a leader, he does not need a uniform to show his rank. General Grant could afford to wear plain clothes—and his were often very plain. But nine hundred and ninety-nine military officers out of a thousand need all the appliances of their rank to give them authority.—*Higginson.*

One might ask, If a man is not a leader by nature, how can he be one even when dressed in all the paraphernalia of leadership? We are of the opinion that a man who is not a leader by nature, or by preparation, had better not try to be one. He may be thankful if he can lead himself.

NOTICES OF NEW PUBLICATIONS.

THE INCREASE OF CRIME AND ITS CAUSE.—By Anna B. Boone. Boston: Published by the Author, No. 42 Hanson Street.

Mrs. Boone is well and favorably known to the public as the devoted mother and assiduous teacher of the "Boone children," whose artistic rehearsals and declamations, as well as Temperance lectures, have been most favorably received in all parts of the United States, and in England. She has been a most strenuous anti-alcoholic advocate for many years, and her son Daniel was a member from five years of age of "The Band of Hope," as it was called in England, being an army of young children pledged to Temperance, and before whom the child Boone gave eloquent recitations of lectures appropriately written by his mother.

We believe in this Band of Hope—"the child is the father of the man," and if we will have manly men, temperate in all things, contempters of strong drink, the seed must be sown in childhood—the boy must pioneer the temperate man.

Mrs. Boone is a clear-headed, earnest, womanly woman, who upholds the sanctity of the household, and the dignities of her sex. She is a keen observer, and an energetic opponent to all shams, pretense, idleness, extravagance, and vanity. The pictures she gives of herself and family affirm her right to reprobate the vices of the age, which she does with a caustic sarcasm and honest indignation refreshing to read. She does not stop with alcohol as the cause of increase of crime—she shows how extravagance in dress and living, the neglect of children, the idleness and unwifely habits of our women, are filling the country with a vicious and morally irresponsible population. She is great on these points; the whole honest soul of the woman throws itself into utterance. She indicates her own struggles with poverty, and many disheartenments, not in a maudlin, complaining spirit, but with the hearty endeavors of a brave one. She says plainly I will be master of my children, and when the giddy Daniel goes out to see the world without her leave or license—he a mere boy, likely to be led into bad courses, what does this courageous matron do? Does she wring her hands and advertise the child? Not a bit of it. She starts from New York City to Vermont in winter weather, with only sixty-two cents in her pocket, and finds the boy, and brings him home.

She is not ashamed of shabby clothes when her purse is low, but tells sundry anecdotes of the discredit occasioned thereby, and of her own pithy, independent action on such occasions, all going to show that the woman is so thoroughly true and wholesome throughout, that nothing can deprive her of her own self-respect. Her little gleams of pride, and a touch of womanly vanity now and then are perfectly charming, and we seem to feel her with us, as we read.

The portrait of Mrs. Boone forms an appropriate frontispiece, representing as it does a fully developed woman, of a noble presence, wholesome and handsome, a woman fit to be the wife of a Caesar, so beyond suspicion is she.

We could wish that every woman in the land might read the work, and learn a new role of womanly responsibility, of courteous friendliness, of wisely devotion, of maternal dignity and conscientiousness. She has touched

the right cord in this book, and we shall look with interest for the autobiography of such a woman, which she has indirectly promised.

SCIENTIFIC ADDRESSES.—By Prof. JOHN TINDALL, LL. D., F. R. S. New Haven: Charles C. Chatfield & Co.

This little pamphlet of seventy-four pages is the fifth of the University series of successful essays and lectures from this young and enterprising house. It contains:

1. On the Methods and Tendencies of Physical Investigation.
2. On Haze and Dust.
3. On the Scientific Uses of the Imagination.

These addresses have already been widely published in the papers of this day, and we are glad to see them put in this handy form for convenient preservation and reference.

TALKS ABOUT PEOPLE'S STOMACHS.—By DIO LEWIS, M. D. Boston: Fields, Osgood & Co.

This is not a scientific work on the stomach, but plain talk about the digestive organs, food, drinks, the teeth, mastication, condiments, tobacco, and a hundred other things, interlarded with stories that will do perhaps more good by the laughter they will promote, than the more serious part of the work. We commend the book, not because it is free from faults, but because with all its faults it contains too much good to be lost.

DRESS AND CARE OF THE FEET.—New York: S. R. Wells.

Works of this kind are not likely to meet with half the sale they deserve. They supply a need of which people as yet are only partially conscious. The foot, more than any other organ of the body, is a slave, a bearer of burdens, and why should we not treat it as such? Because if one member suffers, all the members suffer with it. This work is for the few who wish to know how to use their feet so as to preserve them from all spot and blemish. It aims to show what a foot would be if well treated, and how to keep it so. It discusses deformities, and their causes, and, what is of great importance, it gives full information in regard to boots, shoes, and lasts, and shows how to have them made so that they will answer the ends for which they are designed. We may add that the human foot encased in a boot or shoe made as it ought to be made, is a very happy part of the body, but capable of suffering great misery when encased in shoes improperly made.

THE GAS-CONSUMER'S GUIDE.—Boston: Alexander Moore.

We have no clue to the authorship of this little book, but its aim is to impart information in regard to the proper management and economical use of gas. The writer tells the gas-consumer that it is not always the fault of the manufacturer that their bills for gas are high, and the amount of light yielded small. If the burner is improperly constructed or adjusted, the amount of light yielded from a certain number of cubic feet of gas is very much reduced. We commend the book.

THE PUBLISHERS' DEPARTMENT.

Contributors to this Number.

HARVEY P. PEET, LL. D.,
MRS. H. C. BIRDSALL,
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MARY ATHERSTONE BIRD,
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REV. PHEBE A. HANAFORD,
E. RAY LANKESTER, B. A.,
SIMPLE SIMON,
DR. A. L. WOOD, and
THE EDITOR.

Facts for the Ladies.—I made one hundred pairs of pantaloons, all thick and lined, with one needle without changing it: also made three hundred pairs in nine months. Very truly yours,

Mrs. A. M. TAYLOR

TROY, BRADFORD CO., Pa.

I can inform any one interested of hundreds of Wheeler & Wilson Machines of twelve years wear, that to-day are in better working condition than one entirely new. I have often driven one of them at a speed of eleven hundred stitches a minute. I have repaired fifteen different kinds of Sewing Machines, and have found yours to wear better than any others. With ten years' experience in Sewing Machines of different kinds, yours has stood the most and the severest test for durability and simplicity.

GEO. L. CLARK.

LYDENVILLE, N. Y.

I earned over \$600 in a year with one needle on a Wheeler & Wilson Sewing Machine.

Mrs. PARKER.

NEW YORK.

Interesting to Ladies.—I have used a Grover & Baker Machine for seven years for all kinds of family sewing, quilting bed-quilts and embroidering, and have made heavy beaver cloth cloaks. I have no trouble with the under-thread wearing off, neither will the stitch break on bias seams in washing and ironing. I have used my machine more than a year without resetting the needle, and have used it six years without any repairs more than I could do myself.

Mrs. DR. W. J. SCOTT.

CLEVELAND, Ohio, No. 364 Prospect Street.

The Boston Training School for Teachers of the Dio Lewis System of New Gymnastics will hold its next session in Boston, from July 13 till September 1. For circulars and particulars address F. G. WELCH, Yale College, New Haven, Conn., or Dio Lewis, Boston, Mass.

Talks to My Patients.—Mrs. Gleason's book, advertised and noticed elsewhere, is meeting with a good sale. We can supply it to subscribers and agents in any quantity. A good many ladies are selling it with success. We should like to have in every town a good Lady Agent. For particulars of agency, write to the Publishers.

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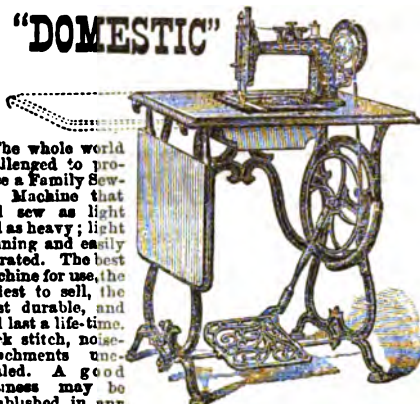
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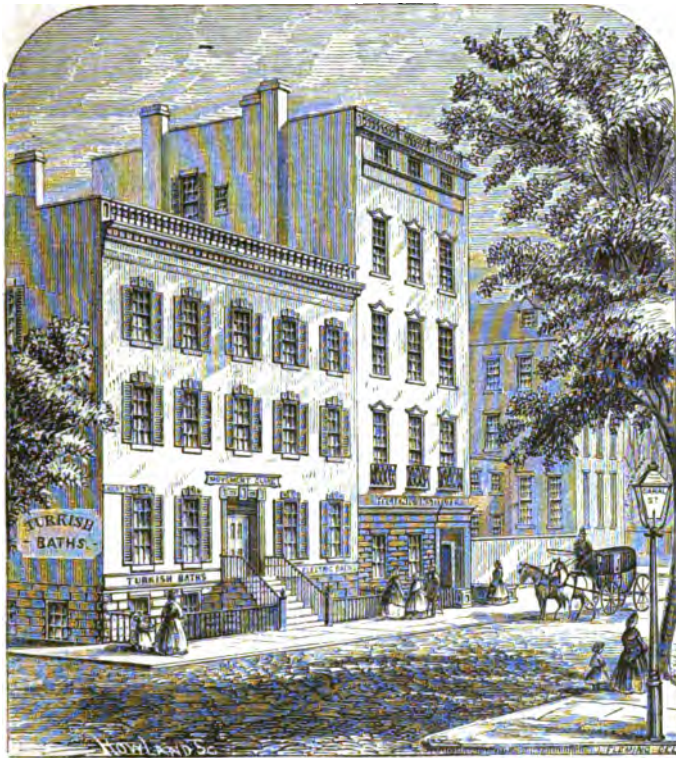
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CONTENTS FOR JULY, 1871.

GENERAL ARTICLES :	Page	EDITORIAL DEPARTMENT :	
Mistakes of Temperance Reformers— <i>O. B. Frothingham</i>	1	Lessons from Peter Cooper.....	33
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Birdsall</i>	6	Evils Besides Intemperance—Diseases Induced by Food.....	34
Toiling Up the Hill to Fame (A Poem)— <i>James Burnley</i>	9	How to Make Good Graham Flour—Nutrition, or Rather Strength Stored Up in Food—Marrying for Money.....	35
Long Journeys— <i>Rev. Charles H. Brigham</i>	10	How Much Tea and Coffee is Used—How Not to Become a Hero, etc.....	36
The Longevity of Man— <i>E. Ray Lankester, B. A.</i>	15	Interesting Cases of Hereditary Longevity—Sixty Years of Suffering, etc.....	37
Jim's Logic (A Poem)— <i>Sunne Tinte</i>	17		
How a City Invalid was Cured by a Night in a Farm-house— <i>Agnes Vernon</i>	18	HOW TO TREAT THE SICK :	
Woodland Rambles— <i>Ellen E. Miles</i>	24	Typhus Fever—Constipation.....	38
What Happened to the Little Boy who Would Smoke.....	26	Prevention of Small-Pox—Sick Room... ..	39
Growing Old— <i>Frances Ellingwood Abbot</i>	27		
Studies in Hygiene.....	30	ANSWERS TO CORRESPONDENTS :	
Recipes for Wholesome Cooking—Preparations for Invalids; Vegetables.....	32	How to Keep Cool—Sunstroke, Cure, etc. 40	
		Headache—Freckles, etc.—Climate for Nervous Diseases—Alcohol.....	4

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NEW YORK, JULY, 1871.

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A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

COMPRISED IN A SERIES OF TWELVE ESSAYS CONTRIBUTED BY OUR BEST THINKERS AND WRITERS.

No. IX.—THE MISTAKES OF TEMPERANCE REFORMERS.

BY O. B. FROTHINGHAM.

IT is always an ungracious task to criticise earnest people. There are so few of them when they are all counted; they are so little appreciated, so much undervalued, so bitterly caviled at, so angrily opposed; so many hard eyes are fixed upon them, so many cruel tongues loosed at them; such multitudes wish them ill; they work so hard and against such odds; they are so lonely, their toil so forbidding; they must deny themselves so many pleasant things, and that pleasantest thing of all, popularity, that earnest men wish to say all the encouraging words they can about them and their labor, doing more than justice, perhaps, to the nobleness of their purposes, and paying glorious tribute to the success of their endeavors.

But, after all, the work is more than the workmen who happen at any particular period to be engaged in it. They must not be glorified at its expense, even if they wish to be, as of course they do not. Their efforts and sacrifices prove that they value the cause more than they value their own self-esteem. They admit themselves fallible by the eagerness with which they mod-

ify their old expedients and devise new ones; they know better than any body how far from being completed their work is; they confess themselves disappointed in the results of all their toil, and are ready to accept any amendments that commend themselves to their judgment.

That some mistakes have been made in the methods of conducting the Temperance warfare must be, and is admitted by the best friends of the cause. It was inevitable that mistakes should be made. No reformers know every thing, have all experience, possess unerring judgment, or are free from the disturbing influence of personal feelings. The work they engage in heats the mind till its temperature is disturbed. The feelings are unduly excited, the judgment is warped, the heroism of the moral purpose is impatient of slow consideration, and in proportion to the nobleness of the aim, the intensity of the zeal, and the eagerness of the pursuit, is apt to be the carelessness of the thought and the heedlessness of the method. A cool observer, without a tinge of the reformer's ability, or a scantling of his moral noble-

ness may be able to point out many an error in his philosophy and many a defect in his organization.

We are inclined to think that one mistake of the Temperance reformers, a mistake which all reformers share with them, which the Anti-Slavery champions fell into openly, consists in paying little or no attention to the criticisms of their opponents. These judges do not wish us well, they say; therefore we can not listen to them. They are mere cavilers. They make it their business to pick holes in our coats, and to trip up our heels. They neither sympathize with us nor understand us. In their view, our whole movement is a mistake.

But these people are, many of them, intelligent; they understand the world; they know how men are ordinarily reached. Their judgment, though hostile, may be correct, for they are simply telling why it is that the cause makes no progress among the people they know about and deal with. They hate the cause and predict its failure. But is it not worth while to know on what grounds they predict its failure? They are of the unconverted. Shall we not listen to the reasons they assign for remaining unconverted? Their criticisms reveal those reasons. By weighing them the chances are multiplied of overcoming them. They that refuse to hearken to the cavils of their enemies must be content to have them enemies still. One way of disarming opposition, an indispensable, though not of necessity a sure way, is to learn precisely why the opposition exists, and this information is gained by consulting those who make it. That reformers should consult with their antagonists can hardly be expected; but they might and should take measures to ascertain what consultations their antagonists hold among themselves. The good General tries to profit by his foe's wisdom, and will even employ spies to visit his camp, to ascertain not only what he is planning, but by what defects in his own arrangements the maneuvers are justified. Certain kinds of correction can come only from antagonists, and if what they say is unheeded, the reformer works in the dark. It is all very well to assume them to be wholly in the wrong; but, to do so, we must assume ourselves to be wholly in the right, which is putting forward the claim to omniscience.

And have not the Temperance reformers been chargeable with this grave assumption? Have they not been too dogmatic? Have they not started with a fixed theory which they held and determined to hold under all circumstances and in all emergencies? some theory, or group of

theories, which they would not allow to be questioned; the questioning of which was regarded as a sign of disloyalty to the cause?

We are thinking of such a position as this: *that alcoholic drinks being poisonous, the admission of them into the system, in any form, and in any degree, is, according to form and degree, deadly.* Granting the truth of the proposition the truth of it is by no means generally admitted, even by Temperance men, and to maintain it brings on controversy when controversy is particularly undesirable. In this single controversy strength has been employed that would have been of the greatest value in the main battle with Intemperance itself. The literature of the Temperance movement bears marks of this discussion in every volume, in every chapter. Each side calls in science, philosophy, history, wit, sarcasm, and at times the dispute has been so warm and continuous that, to a looker on, it might seem as if the main purpose of the Temperance agitation was less to remove an evil than to debate a proposition.

To say nothing now of the waste of time, intellect, and temper on these polemics, or the improbability that a satisfactory conclusion will be reached, the conclusion would be ineffectual if it could be reached, for it does not bear with the least weight on practical issues. The action of this deadly poison, even were it appreciable in individual cases, is too slow to be considered. A great many physicians insist that the poison is in many cases beneficial, and thousands concur in the opinion, knowing that it is agreeable. For some reason or other sots do not die, but persist in living to a great age in most robust health. Patrick ought, on scientific principle to be reduced to interior rottenness by his bad whisky, but he lives on, craving more and more ruin. He ought to die from spontaneous combustion, but his only complaint is that his potatoes have not fire enough in them. Hans imbibes infinite lager and laughs at death, holding lager to be his grand preservative. In the presence of our Irish population, drinking barrels of the vilest alcoholic concoctions in open and secure defiance of the laws that should regulate longevity, and of a German population consuming daily hogsheads of lager beer, without suspecting danger; men, women, and children, scholars and laborers, all swilling together these fine discussions read foolish enough. Very interesting, no doubt, to such as have time at disposition to be interested in them, but for practical purposes of diminishing intemperance worse than unavailing. Appetites are not checked by essays. A devouring passion is a

stayed or subdued by disquisitions over the contents of a retort. Intelligent soakers enjoy the scrimmage between John Fisk and James Parton, and postpone their reformation till the day of demonstration, which they feel sure will never come. The unintelligent appeal to the want of correspondence between the apparent fact and the reformer's theory, and the rough common sense of the masses is satisfied with pointing to very able, eminent, and long-lived men who have been free with the bottle, and apparently been none the worse for it.

Reformers are rarely philosophers. Their philosophy usually is nothing but a strong statement of the considerations that make for their side a statement that never fails to start a contrary statement equally strong and just as partial on the other. And so the truly good work they might accomplish remains undone. There is a moral and social mission to be fulfilled by moral and social means, not by *doctrinaires* or dogmatists, but by people of sober sympathies and robust common sense.

Akin to this mistake of spending force on questions of a speculative character, and springing immediately from it, is another, which is even more disastrous in its effects. We refer to the divisions that are allowed to exist and are even fostered among good friends of the cause. The existence of sects among reformers should be discouraged. Differences should be reconciled; divisions should be healed. In a great emergency, all who can by fair means be induced to work together should be encouraged to do so, in order that the moral may be husbanded and combined. Sects in religion are bad enough, but sects in reform are fatal. The regiments in the field understand each other. The power of the Anti-Slavery sentiment of the last generation was greatly impaired by the dissensions among its representatives, the immediate Emancipationists having no patience with the advocates of gradual emancipation, the Abolitionists who refused to take political action denouncing the Free Soilers who voted. But these dissensions were trivial as compared with those of the Temperance men. Here the cliques are legion.

There are the advocates of Total Abstinence, whose motto is, "Taste not, touch not, handle not," and who disapprove of the smallest incidental indulgence, or the most occasional use of intoxicating liquors for medicinal purposes, and there are those that justify a moderate use of light wines, recommend the not too frequent glass of port or sherry by the aged and infirm, and applaud the stimulating whisky and brandy

in the sick-chamber. One party believes in running away from temptation in all cases, shutting the ears against the syren voices, even when the syren voices are but distantly heard, flying from possible danger as well as from actual; another party believes in running risks, facing temptation, and gaining character by beating it back. There are those who make no exceptions, but put all stimulating beverages under the ban, and there are those who have faith in hock and claret, and wish well to the efforts at cultivating the vine at home, anticipating a decrease in intemperance from the abundance of cheap native vintages. Neither small nor weak is the army of Prohibitionists, who would make it a crime to sell drink; neither small nor weak is the army of Restrictionists, who are willing to allow the sale under strict conditions. The divergencies crop out in every field of discussion, whether physiological, ethical, social, legal, or religious, and no attempt is made to weaken, neutralize, blend, or reconcile them. If they could be made to give variety and flexibility to the Temperance movement; if they could be rendered available for reaching different kinds of people, meeting different phases of difficulty, or furnishing different species of remedy to a wide-spread, variable, many-sided, many-complexioned disease; if they could be compelled to contribute wealth of suggestion, richness of sympathy, capacity of adaptation to a cause which, as it concerns all sorts of people in all sorts of circumstances, in all degrees of culture and danger, demands the utmost versatility of thought and plan, the differences so bitterly complained of might be subjects of sincere congratulation and means of more comprehensive usefulness. For it is quite possible, indeed it is very certain, that people holding all these conflicting views may be earnest friends of Temperance, and determined foes of intemperance—as well the intemperance of the fashionable dinner and supper-table, the costly intoxication of Burgundy and Champagne, as the coarse intemperance of the dramshop, the cheap and disgusting inebriety of gin. They may all agree in regard to the broad social effects of intemperance, may all feel the evils of it with equal intensity, may all be equally willing to adopt such measures as may be deemed necessary to repress them.

But all who are at all acquainted with the Temperance movement know that such a view of the differences in opinion is not shared by the Temperance champions. The differences are exaggerated, instead of being reduced. They break up the force, instead of consolidating it; they disintegrate; they scatter and frit-

ter away energy ; the advocates of the several theories are too busy with endeavors to convert each other, to bend their strength on the conversion of the enemy.

These quarrels and bickerings discourage the bystanders, and afford infinite satisfaction to the mocking adversary. It is hard to believe that people are in earnest who are so sensitive on matters of opinion that they will stop to chaffer over them in the critical hour of action. The judicious grieve at the sight, the malignant laugh. The cunning adversary chuckles also, throws in another bone of contention, and industriously pursues his trade. Earnest people are usually bigots. A certain amount of bigotry seems to be essential to the earnestness. The men who go into battle divest themselves of superfluous ideas and make their philosophy as portable as possible. It is a misfortune, more seriously felt in some cases than in others. But it is seriously felt in proportion to the importance of the occasion and the gravity of the issues. It was a terrible calamity in the old Anti-Slavery days, and it is a calamity more deplorable still when such a task is in hand as that of converting men from brute beasts into decent human beings, the greatest task of simple regeneration that was ever attempted. The long-continued existence of these envies and jealousies, these disputations and jarrings, betrays the want of solid moral vigor in the advocates of the Temperance cause.

The mistake of relying on legislative interference, and engaging in political action, has been so much insisted on of late, that it may seem to some unnecessary to dwell upon it here. But the mistake is so serious in itself ; it is so fascinating, and so pertinacious that it can not be too often exposed. In fact, it is not one mistake, but a bundle of mistakes. It involves a world of blunders, the most desperate of which is the belief that legislation in social and ethical matters can accomplish any thing in advance of actual moral sentiment. Legislation can do much when it voices, authenticates, and formulates in edict the predominating moral sense of a community. But when it undertakes more than that, when it ventures to give authoritative expression to the moral sense of a small minority, it defeats its own end, and makes the evil worse than it was before. It can not create a moral sentiment that is not yet born ; it can not coerce a moral sentiment that is stronger than its own, and is stronger still for being exasperated ; and just when the lawmakers need all the sympathy they can command, it rouses against them a storm of opposition.

This would be the effect, even if the legislation could be as comprehensive as the nature of the case would permit ; even if it gave voice to the general conviction of all who desired the reform.

But it never does this. The legislation always has been, and apparently always will be partial. If the champions of prohibition enact the law, the champions of license rebel. If the latter contrive to put their conviction into the form of statute, the former utter loud cries of discontent. The Maine Law was resisted and evaded by moderate men. The License Law was attacked by total abstinence people. In this way the legislation represents a minority of a minority, perhaps. The friends of the cause it is designed to further, undermine it and labor to get it repealed ; while the vast majority who protest against all legislation on whatever grounds, elude and betray it in every way conceivable.

Thus, to perpetrate a bull, political action fails in the very act of being successful. But this fatal disability does not constitute, by any means, the sole objection to its adoption. It is the bane of all political action that it entangles its engineers in a complication of machinery, the control of which engages their time and consumes their strength, and tempts, if it does not oblige them to forget and forego the main purpose for which the machinery was devised. They must lobby, finesse, compromise, till art becomes artifice, and artifice eats out the soul of sincerity. To choose candidates that will run well they must take such as they can find, not such as they would desire. They must hitch their royal chariot to a trail of donkey-carts and scavengers' wagons, and must consent to travel the high road in caravan with peddlers and thieves. They must adulterate their commodities, attenuate their truth, disguise their intentions, qualify and falsify their purposes, become mendicants and menials, and after all put up with a few crumbs in place of the whole loaf they wanted. Their game becomes a game of chance, and they are fascinated by it, as gamblers always are, till they lose judgment and even conscience in the excitement of the play. The aim now is not to establish a principle, but to establish a party ; not to effect a social reform, but to effect a political division ; not to abolish an evil, but to elect a candidate. They canvass and cajole ; they haggle and hide ; they lie about their adversaries, and worse about their friends ; they practice deceit and chicanery, raise false issues, use bad arguments, enlist unworthy supporters, demoralize themselves, in

short, for what they call a holy cause, and lose at length both cause and character.

The process is exceedingly disastrous. Experience has again and again revealed its tendency to bring reform into disrepute. There is probably no example of a moral reform honestly carried through by politicians. The most conspicuous example in our memory is the Anti-Slavery reform, to which reference has been so often made. The history of the Free Soil party, and later of the Republicans, should give the Temperance men solemn warning. The solid anti-slavery work was done by the Abolitionists, who refused to vote and abstained from partisan associations. The others, when they did not compromise their principles, so diluted them that their virtue was gone, and if they chose their man, discovered very soon that he was not worth choosing.

The cause of Female Suffrage, a cause that, more than any other, calls for moral considerations, has been so far disgraced by efforts to obtain political recognition, that it is all but ruined in the estimation of many thoughtful people. It is all that the wisest and sincerest of its friends can do to maintain its reputation for dignity. Three or four political managers, three or four political experiments, three or four strokes of political diplomacy have come near fatally enmeshing it in intrigue.

There is no charm in the nobleness of a cause that will save it from pollution if it gets into the mire. The champions of truth and virtue must look to their weapons no less carefully than their adversaries look to theirs. They can not afford to discharge any of their force on dirty ropes and greasy pulleys. They need it all, and more, in the good old honest form of conscience.

The recourse to politics is adopted by those who are looking for a short cut to their goal. Weary of the bare contemplation of the long road that leads through moral influence to social reform, half doubting the power of persuasion, appeal, argument, more than half doubting their own capacity to use these instruments of personal conviction, the pioneers in reform, in the spirit of adventurers, call in the help of organized action through the State, foolishly imagining that a popular election will do in a season what the eternal laws require a generation for. And so old and enticing is the infatuation, aided perhaps by love of notoriety, passion for power, craving for fame, private vanity, that the worn-out engine is dragged out time after time and rattled through the streets as if the noise it makes would extinguish the fire.

The zealous reformer no doubt means all for the best, or thinks he does. He intends to keep his great end in view, and never for a moment to lose sight of his principle. But the thing, except with superior minds, is impossible. The end invariably is lost sight of, the principle inevitably is forgotten. Means and ends get confounded together. The means are themselves ends; the ends themselves are means. The right and the expedient, the just and the practicable are inextricably mixed up, so that before long even the well-intentioned man loses his way amid sophistries and casuistries. He uses his ends to justify his means so frequently, that at last his means carry him to ends precisely opposite those he sought at first.

Such are some of the mistakes into which, as we believe, the Temperance people have fallen in their endeavor to bring their good work to a conclusion before its allotted time. If our criticism on them is just, it is no matter for surprise that the Temperance agitation has produced no more effect of late years. The noblest of causes must avail itself of human helps, and must suffer through the weaknesses and errors of its champions. No dignity in a principle will make amends for ignorance, dimness of perception, misconception, or perversity. The noble cause needs the nobler men. John Stuart Mill says, "It is a piece of idle sentimentality that truth, merely as truth, has any inherent power denied to error." The working force of truth lies in the wisdom and will of true men; of men who are true not to a prejudice, or an opinion, or a method, or a party, but to a principle which shall overcome their prejudices, correct their opinions, rectify their methods, and release them from merely party ties.

WATER FOR CULINARY PURPOSES.—The chemical and physical condition of water used for culinary purposes has much to do with health, and is perhaps the ofttest overlooked by the physician in searching for the cause of sickness. We must not suppose that water is only hurtful when impregnated with the salts of lead or other metals; there are different sources of contamination, which produce the most serious disturbances upon the system. Some of these are very obscure and difficult of detection. The senses of taste and smell are not to be relied upon in examinations, as it often happens that water entirely unfit for use is devoid of all physical appearances calculated to awaken suspicion.—*Prof. Nichols.*

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. E. C. BIRDSALL.

WEDNESDAY, January 24.

OUR meeting was quite animated to-day, owing to the variety of opinion upon the chosen subject, the respective advantages of the impulsive, demonstrative manner, and its opposite, the calm, self-possessed manner.

I had foreseen some excitement in regard to this matter, for it has often struck me that thoughtful women are very easily roused by a question of temperament, and are quite apt to hold a strong prejudice in favor of their own particular phase of temperament, even while claiming an admiration for their opposites. The Secretary, after listening to an animated discussion, summed up the matter thus: "It is very evident that, as God created an almost infinite diversity in every kind of material growth, so he did in the formation of our minds. We can safely say that no two persons are alike in their mental constitution, and we have the best of reasons for believing that God did not intend that they should be. But He implanted in every one a divine principle of right, by following which all should approximate, in his or her own way, to our common and glorious standard the perfection of all the good and lovely traits which are but faintly suggested in the most excellent human characters. To this end the impulsive, hasty temper should place itself under the control of reason, far enough to keep its possessor from folly and indulgence in violent passions, but not to such an extent as to restrain the hand from the generous action, the tongue from the kind, loving word, etc., which are the outcroppings of this class of temperament.

On the other hand, the calm, quiet person, dwelling upon a lofty height, perceiving just the right course to take upon every occasion, and looking down upon the impulsive errors of others with compassion, should take great care that her calmness does not degenerate into coldness; and that, in her critical observation of others' actions, she herself does not forget the exercise of the three virtues—faith, hope and charity—and that the greatest of these is charity."

Thursday, February 23.—Our plans are often little worth. Instead of doing my spring sewing, I have spent the last month in taking care of Madge, who threw herself into a fearful sick-

ness by the use of Graefenberg Cathartic Pills. She has been a very trying person to do for. It is fortunate for the race of servants that those of their own station seldom come to be in turn the mistresses of servants, if Madge's wants and orders, at the climax of her sickness, may be taken as a fair specimen of their style of superintendence. Henry, understanding the Irish nature pretty thoroughly, as he thought, would not consent to take charge of Madge's case, but insisted, at the first, upon her making a choice among the other physicians in the place. We have greatly enjoyed the observation of the doctor's method of treatment. He possesses in a marked degree the insight into a patient's condition, which enables a physician to judge for himself without dependence upon the testimony of either patient or attendants. A doctor ought to excel, if he possesses this valuable qualification, together with a thorough understanding of the practical part of his profession. Madge's bell is ringing, and I must leave my journal to dance attendance upon her wishes.

Saturday, February 25.—I took a short drive with my pony and cutter this morning, and stopped at Miss Margaret Stanton's, as I had heard of her return with her nephew's children. It seemed very strange to see the little ones in that childless house. I am afraid they may have much to contend with in the way of *unnatural* treatment, though I do not believe they will ever suffer from positive unkindness. They are dear children, the boy bright and manly for his age, and the girl a lovely picture of delicate beauty. They are both affectionate, demonstratively so; and it is curious to see them clinging to Miss Margaret with their loving, petting ways. She is considerably awkward in receiving their manifestations, but does not part them away, and this is a hopeful sign.

Sunday, February 26.—How delightful it is to go to church again after one has been kept from it for a time. Madge is so much better that we considered it safe to leave her in the care of her sister, who has been helping me with the housework for a week. I was thoroughly tired this morning, but felt sure that nothing could rest me more than a quiet participation in our per-

fect church service; and I did not find myself mistaken.

How much influence writers, even the most obscure and unpretending, may exert! When a very little girl, I read the story of poor Giles, an English poacher. His wife was a good woman, and, when in the midst of affliction caused by the death of her husband and the transportation of her sons, she continued faithfully to fill her place at church; for, as the writer said, she had learned a lesson, which so many never learn, that the church is the place to go when one is weary, or in trouble and sorrow. So many remain at home to brood over their own sad thoughts, and this but increases their trouble, while entering the church with devout and teachable mind, one is almost sure to gain some new and refreshing view of sacred truths to lead them upward, or to have some dormant thought aroused by the words of the preacher. And this thought suggests the Rev. George McDonald's books, which, it seems to me, are so powerful in this peculiar way, that of leading people to fairly think out their own thoughts. Every one is more or less conscious, in reading, of having had the germs of the thoughts which give him so much pleasure in his own mind, and the question arises, Why did I not express that idea? It is as much mine as the man's who has put it upon paper. The answer may come, Because I am not to be a writer. This I do not believe to be the reason, but that it is, at least, partly owing to our mental training. From the first, children should be encouraged to express their struggling ideas plainly, and the best education would follow this by teaching a free, natural utterance of thought in conversation, or *impromptu* composition, rather than in the labored, stilted essays which are characteristic of school boys and girls, and which are usually a reproduction of other people's ideas, rather than an expression of their own original ones.

Monday, February 27.—Aunt Minerva has just announced to me her *engagement*. She is to be married early in May, and she and the Deacon are going to indulge themselves in a wedding tour among his friends.

March 2.—Yesterday Henry attended a woman in her confinement, and to-day, calling at the house, he found her and the whole family moved away to a village ten miles distant. Surely she is not an instance of the physical degeneracy of American women. I have been with Henry to-day to a house on the mountain, to which he

has been called quite often during the winter. Some one member of the family is generally sick, and this may be attributed, in a great measure, to their style of living. We were there at noon, and were so urgently pressed to eat dinner with them, that we could hardly decline. For dinner we had salt pork, fried, and floating in a half-inch of its own fat, sodden boiled potatoes, solid, stiff rye bread, white bad-flavored butter, and some dark-looking preserves. I thought to make a feint of eating some bread and preserves; but, upon making a closer examination of the latter, I discovered that its dark color was partly owing to its being composed in the proportions of one part of black ants and flies to two parts of fruit. The compound probably stood uncovered last fall, without a thought of the effect. It is not surprising that people are continually sick with their stomachs filled with such food! What a contrast to the many homes in which such care is taken in the wholesome and delicate preparation of food! Henry says that he has been trying for the last half year to talk some ideas of the proper quality and composition of food into these people; but they can not comprehend the importance of his views, and look upon them as the whims of a modern doctor. There is one of the family who may possibly be influenced in time, as she is young, and seems to have some aspirations for a better state of things.

Wednesday, March 7.—I was obliged to absent myself from the meeting of the Society to-day by a grand scene between Madge and her sister, Bridget. The storm has been brewing for some days. Bridget made up her mind that Madge was well enough to help herself a little, and it seems that this morning she refused to do any thing more for her, until she would do something for herself. I allowed the storm to rage for a few minutes, then went to Madge's room, and, as if I had observed nothing unusual, sent Bridget to some work which would occupy her for two or three hours. Madge then poured forth her grievances to me, and, when there was a pause in her cataract of words, I told her that Bridget was partly right, that although she, Madge, was by no means well, she was able to assist herself in some small ways, and need not now be cared for quite like a baby. To turn her thoughts into a more hopeful channel, I proposed to her a visit of a month or so among her friends, as soon as she was able to ride to where they lived. She was soon in better temper, and will probably improve in health with this incentive before her.

Sunday, March 11.—What a variety there is in the ways of observing Lent! The uneducated Romanists abstain from the eating of meat, thinking that they are doing something "acceptable to the Lord," and, as compensation to their stomachs, they eat immoderately of eggs and fish, two articles of which they, most of them, are very fond. I have tried to explain the principle of true self-denial to Bridget, who looks with horror upon our plain meat and vegetable dinners, but surfeits herself upon eggs; but I have only succeeded in obtaining a blank stare in reply, or a statement that it would be "No fasting at all, at all, to ate mate, whin it was forbidden by the praste." But in these ignorant, credulous creatures, this is more excusable than in people of culture, many of whom pursue the same course. It is a season which all need, and which would be productive of much good, if it were employed in cultivating the spirit of true self-denial in regard to practices which are hardest for us to overcome. Dr. Hutton gives most delightful Wednesday and Friday evening lectures, which he extemporizes. Although a good sermonizer, he is superior in extemporizing. His impromptu addresses are so full of meaning, so pleasantly personal, that each individual may take some portion of the remarks to himself. He is so searching and discriminating, that he leaves no room for self-deception; and, yet no one can ever accuse him of being denunciatory, for he always applies the healing balm to the sore, wounded heart, and this is where some clergymen fail. Denunciation may not be one of the common errors of the pulpit—indeed, I have heard people of far larger experience than my own, claim that there is a deficiency of this quality in latter-day preaching. But I know that I have suffered personally many a time from the sermons of Mr. Gartney, who formerly preached in Burtonville. In society, he was the most genial, cordial of men, and apparently full of trust in the good intentions of his people; but, when he was in the pulpit, this passed away, and he preached as if nobody could be trusted. It was very disheartening, entering the church with a heart exulting in the sense of God's goodness, ready to take in the bright, happy truths of the gospel; or, when feeling sad and humble, and desirous of consolation and guidance, to be met with the reiterated assertion—"all have sinned and done wickedly," accompanied with the minister's unvaried refrain, if not in these words, at least in this idea: "I dare not believe there is any one, except some distinguished saints, who have turned from the error of their ways, and can hope for

everlasting life." To the morbidly inclined, such preaching must be very injurious, for they need bright, cheerful views, instinct with the electricity of spiritual light, to raise them from their torpidity to action.

It seems to me, that it is not more *pulpit* denunciation that preachers need, but more moral courage to go to individual wrong-doers, and say, "Thou art the man." Most country ministers, who are usually brought into closer connection with their people than those in charge of city congregations, are perfectly well aware of the fact, if a man of unworthy character habitually partakes of the communion; but where can a minister be found, who will go to communicants who on week-days deal with wrong measures, or take advantage of their neighbor's ignorance to obtain exorbitant prices for their produce, or who are unfaithful in the most sacred of family relations, or who spend their time in pouring out the venom of a wicked heart upon unsuspecting neighbors, and will reprove them face to face, and will say to them in all love and humility, "You have no right to come to the table of the Lord while you continue your evil doing?" There may be such men, but they are rare.

Tuesday, March 13.—To-day I have had my first ride in my new carriage, which I have not used before on account of the bad traveling. It was made to order, and it would not be surprising if the village boys dubbed it "Noah's Ark," on account of its low, unwieldy appearance; but I do not care, if I can carry out my intention of conferring some pleasure and benefit upon people heretofore unable to take any out-door exercise. Old Mr. Welsh went with me to-day. He was formerly a very active man, but has been kept from exercise for some years, by the loss of his health, accompanied by the loss of property, which has prevented him from even riding. The morning was delightful, somewhat windy, but none too much so for March, as the air was free from the disagreeable, penetrating chill so frequently a quality of March winds. I thoroughly enjoy a dry, warm wind like that of to-day, which reddens the cheeks, and seems to invigorate the whole system. I drove to the top of Eldon Hill, five miles west of the village, and there we had a fine, unobstructed view of the valley. The loveliness of the scene, and the sweetness and warmth of the air seemed to charm Mr. Welsh out of his usual reserve. He is really a remarkable conversationalist. His clear-headedness at eighty-one must be ascribed to his temperate and upright habits.

Toiling Up the Hill to Fame.

BY JAMES BURNLEY.

TOILING up the hill to Fame,
Foothold daily growing firmer,
Went a youth of humble name,
Buoyed up far above the murmur
Of the flint-eared, heartless world.

Poesy's keen volcanic fire
Swayed his soul in self-willed fashion.
Goaded thus, he seized the lyre,
Tried to tune it to his passion,
But he only charmed himself.

Still he strummed, and journeyed on ;
Still the world its ear averted ;
Still—interpreted by none—
He and his songs were all deserted,
Cast adrift to die—or fight !

And the youth chose he would fight,
Throat-grip the crowd, make men listen ;
Force the film from off their sight,
Till their eyes should flash and glisten
At the dawn of higher life.

So he fought, and lost ; but e'er
Sang on with a voice unshaken,
Till he struck a chord so rare,
That its strangeness made men waken
To his presence on the hill.

Chords more sweet he'd formed before,
Chords of higher, deeper teaching,
Chords which Fame had sure passed o'er,
Had not his music tripped, and screeching
Broke the spell and charmed the world.

Then he topped the hill, and there
Fame with laurel wreath did meet him,
Bid him turn from Art, and care
Alone for Noise, and men would greet him
As the mouthpiece of their hearts.

Long Journeys.

BY REV. CHARLES H. BRIGHAM.

“WHERE shall we go in the Summer?”—the question which we examined in the last essay of this series—is only subordinate to the consideration of the long journey which every American who can afford it expects and intends sooner or later to make. All good Bostonians will go to Paris, when they die, if not in their life time; but going to Paris by the short Atlantic ferry seems too much like an excursion. Yankoes make up parties now to go “round the world” with the same ease that they once made up parties for Niagara, or the White Hills. The expedition of the “Innocents Abroad,” which Mark Twain so happily celebrates, is ceasing to be exceptional. If the large sale of Mr. Raphael Pumpelly’s *Travels* proves any thing of American purpose, we may expect that a sleigh-ride of five thousand miles through Siberia will be the rational passion of fashionable travellers from New York and New England. Enthusiasm for African travel has fallen off in these last years. So many martyrs among those barbarous tribes of the coast, and in that malarious climate, have checked the impulse to penetrate the African mystery, and find the blessed Arcadia of the African interior, of which Dr. Livingstone so lovingly discourses. No Sahara parties have issued their prospectus, and the successful operators among the bears and bulls of the Stock Exchange have no fancy for adventure with lions and gorillas in the lands which Du Chaillu has made so romantic. Africa may be ruled out of the field of long journeys, except for some singular enthusiast of science. Even the missionaries are forsaking those pestilential shores, which gad-flies, cannibals, and irreclaimable barbarians have fenced from the way of the white man. A Nile voyage is rather part of travel in Europe than of travel in Africa. A lazy sail on that historic river is not an expedition to fresh fields and pastures new.

The area of attractive journeys is, nevertheless, continually expanding. Dr. Hayes tries to convince his hearers that nothing is more exciting and profitable than a trip to the North Pole; except for fat men, who will be frozen before they get there. He invites all who would vindicate their fame as travellers to assist him in planting the stars and stripes on that supreme point of the earth so near to the ruling star of all voyagers. Has not Mr. Dall opened Alaska

to Americans who would heed the words of their grand Senator, and Mr. Kennan made Kamschatka, with its koraks and its volcanoes, as delightful as Thoreau made Cape Cod with its sand banks and its fishermen? Even if St. Domingo shall be spurned by jealous partisans, will not the emphatic testimony of old Ben Wade and his companions turn the keels of voyagers toward that long-neglected gem of the sea? Very opportunely comes the new story of the “Mutiny of the Bounty,” which thrilled in their childhood the old men of to-day, and we shall have yacht expeditions to Pitcairn’s Island to see the Eden of the ocean and the scene of the innocence of primitive life. Perhaps Mr. Washburn’s volumes will draw the curious to Paraguay to see the land so desolated by human monsters. Even Patagonia has a demonstrator, who bids inquirers to come and see the rocks, the penguins, and the giants of that wild end of the continent. The area of travel is now the “wide, wide world,” in more than a sentimental sense, the old countries and the new, the new countries and the far, the cold countries and the hot, the lands of kangaroo and reindeer, not less than the lands of ruins and restaurants. Hepworth Dixon, who follows his narrative of the Oneida Communitists and the Salt Lake polygamists with an account of the White Monks of Astrachan, is a type of the traveller of this age, and, especially of the genuine American traveller, who is bound by no insular limits or traditions.

But we are not proposing in this essay to point out the attractive ways of travel on the earth, or to decide in any dogmatic style between Ireland and Iceland, Egypt and Australia, the Amoor and the Amazon, Switzerland and the Himalayas. Rather we would offer some “practical observations” on the good and evil of long journeys, and the best method of improving them—on the hygienic and moral value of going far away from home and moving up and down upon the earth. Money-getting men have a certain contempt for the itinerant which they are not slow to express. The proverb about the rolling stone seems to settle the question, just as the remark of the Presbyterian to his Methodist brother, of Satan going up and down on the earth, seemed to settle the question of an itinerant ministry. To many, long jour-

neys seem to be only squandering of time in empty sight-seeing, only a trifle better than the waste of the prodigal who goes into a far country to spend his substance in riotous living. Why should a thrifty merchant, who has a store on Water Street, with an ample stock of salable oil or iron, and a house on Twentieth Street, with brown stone front and furniture of the newest pattern, wish to tumble for weeks upon the deep, or go dawdling among picture galleries, and in dull old churches, where human ignorance and superstition show themselves so painfully, or expose himself to all sorts of discomforts and mischances? Let him go to Saratoga, or the White Mountains, or to California, if he can afford it—travel in his own free and enlightened country where they speak Saxon English, and not barbarous jargon. But in the name of common sense, why should he spend a fortune in carrying his family off to old worn-out lands, or to deserts and icebergs, where there are no palace cars, and only lies and jabber for the tormented ears of a helpless victim? Paterfamilias, who has made his money in selling hides or groceries, may submit, but he sees no good in this “going abroad.”

And more candid men than he will admit that long journeys have their inconveniences, and that the pleasure of foreign travel is not unalloyed. In a former essay we mentioned some of the annoyances of railway travel in our own land. Foreign travel has some of these and many more, especially, when one “goes with a party.” The late President Felton said to us with a sigh, at a hotel in Switzerland, that he had never realized the full force of the Latin “*impedimenta*,” until he travelled among mountains with a party of ladies; that he lost half the beauty of the scenery in anxiety about the “luggage,” as the expressive word of the English traveller describes what we call “baggage.” Luggage is certainly one of the plagues of long journeys. You can not go without it, if there are many in the party, yet you can not keep it with you without infinite vexation. From the time the trunk is first packed in New York, and six cubic feet made to hold the contents of a bureau and a wardrobe, until the time when it returns scratched and battered, with its heterogeneous mess of old clothes, nick-nacks, guide-books, and photographs, to run the gauntlet of the custom-house, that trunk is a constant and unmitigated nuisance, as you see it tumbled and tossed about, opened and ransacked, weighed so jealously, that every extra ounce may be taxed; the hopeless prospect of making it hold all that it must carry, and the despair when you get

with it beyond the reach of vans and porters. And when this trunk has a dozen companions, the plague is multiplied in geometrical ratio. Luggage is the necessary bane of all comfortable journeys, a plague which begins with the first day, and never ends until the journey is finished. If you “send it on,” and use only a knapsack for intervening stages, you are all the time anxious lest it should be lost, and you are sure to want it when you are without it. You must have it for the “*table d’hôte*,” for calls of ceremony, for the opera, and for change of raiment, in heats or in showers. It doubles the cost of the journey, and yet is indispensable.

Sea-sickness, too, is another of the annoyances of a long journey, which four out of five of all who venture on the deep will be compelled to pass through. We heard a good Canadian once, who had no Irish blood in his veins, vow that he would never cross the ocean until he could “go by land,” much as he wished to see the home of his gracious Queen. If Paris is Paradise, it must be reached through this purgatory of an ocean voyage. No remedy has yet been discovered for this wretchedness, so real, yet so impossible to tell in words. Many desperate souls resolve when they set foot upon the pier, after days and weeks of marine misery, that they will dwell abroad and expatriate themselves for ever. If it were only the monotony of those sea-days—the sensation of a prison-house, with a chance of being drowned—it could be borne with. But this, with nausea and the basin besides, is too much for endurance. Yet these things are only the beginning of sorrows. After them comes change of diet, the new cookery and the strange dishes, which vex a well-trained American stomach—garlic, and saurkraut, and haggis, with all sorts of heathenish condiments. Shall we be able to drink the water? Yet our Temperance principles will not allow us to touch the whisky or gin, and we are afraid that there is poison in the wine. There is an awful foreboding of gastric trials, more severe as the journey is longer. If starvation is not feared, there is serious danger that the digestive faculty will be fatally demoralized in the constant change of its habit. How can a respectable New Englander get on in those benighted lands, where codfish is unknown and there is no ministration of pork and beans? And how shall an orderly citizen, whose hours of feeding have always been regular, and who has dined at noonday, reconcile himself to the perverted custom which breakfasts at noon, and dines in the evening? The dietetic practices of foreign

lands warn a traveller of the trouble of his voyage.

And how many minor plagues the imagination conjures up! Scotland, the romantic land of castles and crags, and eagles, and battlefields;—yes, indeed, but will they not fine you, if you take a walk on Sunday, or hint that you doubt about the five points of Calvinism? The Lake District, Skiddaw, and Helvellyn, and Grasmere, and Derwentwater, and the Falls of Lodore, and all that;—take a supply of India-rubber coats and umbrellas, if you go there, for it rains all the time! London, the world in miniature;—you will get lost in the fog, and have your pockets picked! The lovely Rhine, with its hanging vineyards, and its wild legends; but think of the bores that fasten themselves to you on that classic stream! Grand, gray old Rome with its three hundred churches, and its palaces, and its columns, and its dear dingy ruins;—the “enemy” is there, and it is a contemptible insect, which is never under the finger that would crush him. Has not each noted city its special annoyance, and, are there not in all omnipresent nuisances—couriers waiting to entrap and swindle; valets de place, taking you always to the wrong places; waiters running in to light your candles at mid-day, so that they shall appear in the bill; facchini by the dozen struggling to appropriate your valise or your carpet-bag; “something for the driver” when you are driven, and something for the obsequious lackey who bows you out of the church or gallery; passports which have to be “*visé*” at an expense of a dollar or two for a stamp and a signature; mouldy rooms, with an odour of the charnel house; impositions in the shops, which ask for an article four times its value, and make you waste your time and temper in haggling over trifles; lies of all kinds and on all subjects—scenery, distances, conveniences, police regulations, white lies and black lies, of princes and beggars and priests—all these nuisances, and how many more, magnified and multiplied as you get farther away from the happy centres of American civilization?

A wise voyager will not refuse to consider these evils of his way, will not set out with the idea that all is to be of rose colour, or that his expedition in these new lands is to be a perpetual picnic and festival. Let him consider the days of darkness, for they will be many. Unless he has a stout and stoic heart, he will be homesick even in the midst of wonders and splendours, and will long for his house in Bridgeport or Smithville, while the frescoes of Italy, or the arabesques of Damascus are around him, as the

Hebrews by the rivers of splendid Babylon pined for their home on that narrow hill of lonely Zion. He must expect to be fatigued, to be bewildered, to be imposed upon, to be irritated to be bored, to get into disputes, to be robbed, to catch malady of the feet and the throat, and to feel heart-sickness as well as sea-sickness, if he wanders far away from his pleasant home. Yet all the nuisances can not offset the substantial good of long journeys to one who would renew his strength and increase his knowledge. A long journey is genuine recreation of soul, not merely temporary exhilaration. It makes a man a new man, gives him a new lease of life, a new epoch in his life. If he has been a hard worker with his hands, it gives him a needful release from toil. If he has overwrought his brain, it rests that organ. It stores the mind with new images, and gives correct ideas of the appearance and relations of things. Mere reading, however full and constant it may be, cannot give what comes in through the eye, and through personal contact with the scenes and ways of foreign lands. Memory gets a much more durable and trustworthy supply in foreign travel than in the treasures of the best library. A man who has travelled widely will be an intelligent man, in spite of his defective education in the schools, and will always have something interesting to tell. Foreign travel enlarges sympathies, takes the conceit out of men, hinders bigotry, and gives one larger ideas of human life. It increases the tolerant spirit, while it confirms self-respect.

Some complain that they are not fit to travel abroad, that they do not know enough, that they do not know what they are going to see, and do not know what it all is, or what it means when they see it. The picture galleries, with all those works by the “old masters” will be no more to them, they say, than the coloured lithographs of a Broadway barber’s-shop, and they have been so wonted to the houses and churches of a new country that they can not judge of ruins. Undoubtedly, fitness for travel has much to do with its pleasure and profit. It is well to have read history, to be expert in foreign tongues, to have a trained eye, and a cultivated taste. But even a boor will get some good in journeying abroad, and will find himself less boorish after his experience. The most narrow patriot, who treats all foreigners as outside barbarians, will improve the tone of his patriotism by personal acquaintance with these “Fan Qui,” these foreign devils. Foreign travel has its benefits for all classes, for runaway apprentices as much as for graduates of Harvard, for

newly emancipated slaves as much as for the children of the first families of Virginia. A Springfield gunsmith may get quite as much from a journey in Europe and the East as a Greek professor, and may be able to give quite as interesting an account of what he has seen. Ralph Keeler and Bayard Taylor are as entertaining in their stories of travel as Prof. Felton or Dr. Prime. Some get more benefit than others, but all get some benefit. Even the most eccentric voyage has its advantage, as the new books about Patagonia and Kamschatka prove. No amount of satire, of John Whopper and Brick Moon stories can nullify the genuine gain which those who have taken any long journey feel in remembering it. Its vexations come as part of the gain; there has been moral as well as intellectual profit in the voyage. Some are fitter for travel than others; but any one is fit for travel who has the courage and the inclination to attempt it.

What we have already said of the benefits and the annoyances of foreign travel may suggest some general rules for long journeys, which are of great importance, trifling as they may seem in connection with so dignified a subject. These rules are of nearly universal application. And the *first* of these rules is, *to set out upon the journey in good health and spirits*, with a good appetite, a regular pulse, elastic muscles, and a cheerful soul. These will do more than any thing else to prevent sea-sickness, to lighten vexations and to make the experiences of travel profitable. Invalids certainly are blessed in going to Europe. Dyspeptics and hypochondriacs are cured often by that remedy, and phthisical patients forget their chronic cough when they get over the sea. One chief purpose of going abroad is to recover health, both for the jaded merchant and the shattered "servant of the Lord." Yet it remains true that a well man will get from his travel much more than a sick man, and that a sound body is a better outfit than shawls and cordials and "gum shoes." No one who can help it should start on a long journey as if he were going to a hospital or to a funeral. Healthy men make the best travellers, as they are always the best companions.

2. A second rule is to *adapt yourself as far as possible to the customs of the country in which you travel*, to do as the people there do, and to take things as they are. That is not John Bull's rule. He must always have his cup of breakfast tea, his slice of toast, and his boiled egg in the morning, though he is in a land where tea is medicine and fowls are few. He must carry his Church and his prayer-book with him, if he

goes to Japan or the Arabian Desert. Half the good of journeying abroad is lost by this insular conceit. It is much more reasonable to sacrifice prejudice, and do as the Romans do when you are in Rome, or as the Russians do when you are in Moscow. One need not go away so far from his temperate habits as to guzzle whisky all the time in Scotland, or get drunk daily in Stockholm, or muddle himself in the evenings in Munich with six quarts of beer, or burn his throat with Syrian arrack, because this is the custom of the country, but even the most abstemious man loses something if he travels through all the wine countries, painfully avoiding any sip of the juice of the grape, in the sense that he is a Son of Temperance; if he climbs Vesuvius without refreshing himself with the flavor of the "Tears of Christ" at the Hermitage, or visits Jerusalem without testing the vintage of Eshcol. A man is a fool, who is so persuaded of the sufficiency of his own natural habit and language, that he will not listen to a word of the outlandish foreigners, or visit their idolatrous temples. We knew of an Englishman, who made it a rule in Rome never to go into a Catholic church on Sunday. He could not keep the Sabbath except in the bare Anglican Chapel, beyond the "People's Gate." All such narrow patriotism is pitiful and mistaken. It is better to make blunders in conforming to the customs of the country than to wrap oneself in the mantle of an immaculate nationality. Even a Bostonian will be laughed at, if he undertakes to show the manner and use the tongue of the modern Athens under the shade of the ancient Acropolis, or to pronounce his Greek with the accent of the Boston Latin School.

3. A third rule of foreign journeys, very necessary to comfort and profit, is to be *moderate in sight-seeing*, and not try to see every thing that any one has seen, or to do every thing that any one has done. There are bounds to the ability even of the strongest, and to the endurance even of the most persistent. Omit a few of the palaces in Genoa, and of the churches in Rome, and of the ruins in Egypt, and of the cities in India. See what is best worth seeing, and what is characteristic of the place, but do not torment yourself with the notion that you must see every thing. Not a few travellers compel themselves to be hasty and superficial, because they can sacrifice nothing of their programme. They have only ten minutes for the picture gallery, and five minutes for the market, because they have twenty other places to visit, and must leave by the diligence precisely at

1 o'clock. It is a painful confession, no doubt, for a healthy traveller to make to his friends that he has omitted any thing of note in his journey, and he is sure to find from the assurances of these friends that the things which he omitted were just the most important of all. Humiliating as it is, nevertheless, no traveller can be expected to be omnipresent, or to do the work of ten days in one. It is better to see a few things intelligently and thoroughly than to see many things only with a passing glance. Only an idiot will undertake to "do" Germany in a week or Holland in a day. One may write a trustworthy account of the Chinese, without exploring all the provinces and climbing all the pagodas of the Central Flowery Empire.

4. On the other hand, there are eccentric travellers, who pride themselves in saying that they do not care to see what every one else sees, that they wish to be independent, and go in the byways rather than the highways. And we should, against the custom of these, urge the rule, not to be *eccentric*, not to neglect any thing or any place because it has been visited so much or described so often. A Boston physician, in his tour, rushes straight from St. Petersburg to Madrid, disdaining to heed such trodden lands as France and Deutschland. A wiser traveller would have halted in the way. Believe that the trodden ways are the pleasantest. It is a very poor ambition that would try to make things important which the general verdict has long ago pronounced to be of inferior worth. You will find at Damascus the scenes of the Arabian Nights, if you go to the cafés and the mosques, and the bazaars, and the gardens, much more than if you go mousing among hovels and dogs in out of the way lanes; and you will see how Paul was let down in his basket, if you notice all the latticed windows, more easily than in fixing upon some hole in the wall that nobody has seen. Eccentric travellers are disagreeable companions and nobody wants to have them in the party. They bring home very little that any one cares to keep. The new discoveries are usually made by those who go in the old paths, by those who dig on the Esquiline and Palatine hills, and not by those who drain the Pontine marshes.

5. Another rule of comfortable journeying is to go with a *small party*, rather than with a clan. Mark Twain's story tells the miseries of a company compelled to keep together, and how inadequate their Evangelical faith was to their Christian serenity. The best party is of *three* persons only, enough for company, and enough

for a majority in case of difference. More than these only increase difficulties and delays. In a party of ten, the chance of trouble is a hundred-fold greater. Two congenial companions are worth more than a caravan of associates, for whom you may be responsible, while they are yet not in sympathy with you. You do not want too many associates more than you want too many trunks.

6. And this suggests the rule, not to be *encumbered by superfluous appliances*. Take it for granted when you are travelling in civilized lands, that you can buy or hire what you want to use, and when you are travelling in savage lands that there will be no need to follow the New York fashions or to "dress for dinner." Stout and suitable clothing, that will hold together and shed dust readily, and keep the body warm, is very necessary, but not the latest style, and not any great variety. On a long journey, it is not necessary to "keep up appearances," or to be anxious lest you should meet Mrs. Grundy. Her tongue can do small harm to you, when you are both away from home. Let fashion go while you are travelling, certainly until you get back to Paris, and lay in your stock of valuables for the next lustrium.

7. And this remark seems to call for one more rule, to *buy in every place what is characteristic of the place*, rather than postpone this until you get to Paris. It is easier and cheaper in the end to get what you want "upon the spot." You may not find it in the great centres of traffic and fashion, and may be sorry when it is too late. And in the multitude of new impressions you may forget a great many things which you had resolved to secure. A souvenir of Palestine, bought in New York or Chicago, is none the less a cheat that it came from the Sacred Land.

WARM BATHING.—The warm bath is a grand remedy, and will often prevent the most virulent of diseases. A person who may be in fear of having received infection of any kind, should speedily plunge into a warm bath, suffer perspiration to ensue, and then rub dry, dress securely to guard against taking cold. If the system has imbibed any infectious matter, it will be certainly removed by this process if it be resorted to before the infection has time to spread over the system; and even if some time has elapsed, the drenching perspiration that may be induced in a hot bath will be pretty sure to remove it.—*Family Herald*.

The Longevity of Man.

BY E. RAY LANKESTER, B. A., OXFORD.

CIVILIZED man lives in societies, one of the most essential bonds of union in which is the maintenance, to a greater or less extent, by the community of the feeble. The security which the healthy and vigorous man hopes for himself, when grown old and feeble, he naturally extends to others, and thus the aged are fed and protected as the result of a specific habit or characteristic among men (the most barbarous excepted).

Further, the intellect of man renders him utterly unlike animals in much that relates to age; for while he grows feebler in limb, unproductive as a laborer, impotent as a warrior, in all such regards a mere burden on the species, yet the knowledge and experience stored in his great brain is of use to his younger fellow-men, and age is for that reason respected.

Men exist in the most diverse conditions, not only in distant lands and varied climates, but even in the same city, in conditions so diverse, that were any other organism known, to be submitted to an equally great range of external agencies, even the most highly developed, it must either perish, or, if gradually introduced to the change, must so completely modify its structure as to become a new and distinct species. Originating in the East, in a warm but not a tropical climate, feeding on rich and abundant fruits, he has yet gradually spread over the whole world, and does not show any material modification of structure. When circumstances forced him to cold countries, his intelligence made him light a fire and build a house, and cover himself with the skins of other and inferior animals, which he entrapped by cunning, and whose roasted flesh served him as a substitute for the failing fruits. As necessities arose, he learned to build boats, skill of all kinds became his, and his vast knowledge was gradually acquired, and handed down from generation to generation, and passed from man to man by means of speech, which yearly grew more perfect. Meanwhile, he lived in families at first, then in tribes, and still later in societies of various kinds, which have grown, and are daily growing larger, in virtue of which the *individual* struggle for existence is, almost in the most civilized, and must be eventually entirely, abandoned, Darwin's law of survival of the fittest

operating through the emulation of hundreds of varied combinations of men as wholes, instead of through the isolated struggles of the units composing them.*

The structural differences which have been produced in men by their distribution over the various parts of the globe, are apparent enough to the eye; perhaps seeming greater than they really are, as compared with differences among other individuals, by reason of our detailed knowledge of the objects compared, when they are men. But these characters of skull-form and hair-form, of complexion and hair-color, and of size, which are what constitute the chief divergencies, other than those of the brain, among men, are not sufficiently constant in races to enable naturalists to ascertain the pedigree of the various nations of the earth, and to group their races by descent.

Potential longevity being dependent on structure (as pointed out early in the essay), and the various races of men not exhibiting constancy in structural character, we can not expect that the various races should exhibit any thing like an approach to *specific* potential longevity. We have, on the contrary, every reason to believe that a man of English race and a man of Fuegian race, who by gradual change in the condition of their ancestors (for sudden change is likely to act injuriously by its mere suddenness) should be living side by side, would live to the same period of time, that is, have the same potential longevity. But it is true enough that either the Fuegian would be no longer a Fuegian, for he would have abandoned the habits and conditions of life which are his peculiarities, or the Englishman would have ceased to be an Englishman by similar metamorphosis. Buffon, a man of really great insight and philosophical spirit, says: "The man who does not die of accidental causes reaches everywhere the age of ninety or one hundred years. If we reflect that the European, Negro,

* Individual men do not struggle for existence—that is assured to them by society—they struggle to 'get on.'

† Dr. Kane, the American Arctic explorer, and his companions, after residing three years in a high latitude, experienced the most severe injury from the summer heat of the Northern States, and eventually Dr. Kane died from the exhaustion and prostration so produced.

Chinese, and American, the civilized man, the savage, the rich, the poor, the dweller in the cities and in the country, differing so much from each other in some respects, all resemble each other in having the same allotment, the same interval of time to pass from birth to death; that the variations of race, climate, food, conveniences, have nothing to do with the duration of life—we shall discover that the duration of life does not depend on habits, customs, nor on the quality of food. Nothing can change the physical laws which regulate the number of our years." Buffon does not bring forward adequate data to support his statements, and we can not admit the truth of his assertion in its entirety. But we have seen reason to believe that *hereditarily* the power of life in all men (within a few generations) is the same, disease, habits, and customs being dependent on external conditions, and thus longevity is rendered subject to external rather than internal causes, in the case of man; though with these varying external conditions are correlated small structural variations, which may make the longevity, in a certain sense, appear to be dependent on structure, so intimately bound up, so closely corresponding and reciprocal are structure and habit, even when dominated by such an organ as man's brain.

What we are concerned with, then, in the various kinds of man, is not variation in hereditary longevity, but variation in the longevity of groups characterized by different habits, food, etc., and it is not to the race of men, but to the difference of conditions in which they live, that we must direct our attention. Man's brain by its adapting power makes the essential conditions of life much more nearly uniform than would at first be supposed from his varied habitat, the total expenditure in procuring heat, food, safety, and in reproduction together being about the same in most races and classes. Hence we do not look for *much* difference of longevity, even in different climes and different civilizations. It is when we come to extremes, however, such as do exist, in which men are living and not adequately contending with nature by their intelligence, but are getting worsted in the struggle, that we may expect appreciable variation in longevity; the expenditure is increased in one direction without being diminished in another, and consequently the longevity suffers. Thus, while the savages of Polynesia and of many parts of Africa, together with the semi-civilized Mongolids, and the highly-civilized Lapetids, are, through the action of their brain power, equalized as to potential longevity by

equality in respect of accessibility of food and warmth, what the barbarous gain by the diminished expenditure implied in warmth, abundance, and absence of intellectual exertion, being made up to the civilized by the higher evolution both personal and social; yet there are extremes of misery and want, of cold and of heat, to which the most degraded savages are subject, not being sufficiently intelligent to cope with these difficulties, and to which classes of men even in the most civilized communities are born and bred, not allowed by the more fortunate to receive either necessities or education, which no doubt entail upon these savages and these classes a much diminished potential longevity.

There is then perhaps reason to admit hereditary diminution of longevity in such cases as compared with the mass, though the hereditary character will probably cease to affect the second or third generations after removal from the injurious conditions specified. The same character of temporary heredity appears in families which for some few generations are often remarkable for longevity; or, on the other hand, through disease,* intemperance, or other feebleness in parentage, are equally remarkable for short life. It is in this regard that the question of the average longevity or *mortality* of groups of men to their *potential longevity* deserves to be closely studied. At present, there are no data to solve the question as to the extent or nature of the influence of the one over the other.

We may almost look upon excessively injurious conditions of existence and their effect on individuals as a definite thing comparable to a disease, being just as abnormal as in contrast with the most healthy state known to us; and we may say that no man with the disease "Fœgian," or "Esquimaux," or "Australian," would have as fair a chance of long life, however favorable his circumstances, with that exception, as the man who does not labor under the disadvantage of a long ancestry of degraded savagery, and is therefore free from such disease; just as we have no hesitation in saying that a man with hereditary phthisis, scrofulous, or cancerous tendency, has not so fair a chance of long life as the healthy man. And just as in the course of a few generations the offspring of the latter may become quite healthy, so may the offspring of the former, in so far as his hereditary tendency to short life is concerned.

* Disease may be regarded as increasing expenditure—entailing abnormal and useless expenditure, often in excess, by causing exhaustion, misdirected nutrition, etc.

Jim's Logic.

BY SUNNE TINTS.

'T WAS Jim, with the curly hair,
And the bold, mischievous eyes,
Eyes as black as they were rare,
And the small brown hands besides.
'Twas this metaphysical youth, I say,
Who disturbed his Sunday-school class one day,
And refuted his teacher's logic.

"Why so late?" the teacher said;
Jim replied in surly tone,
"Been in swimming." He grew red,
And was guilty of a groan.
She placed her arm 'round his thin little waist;
He, with Irish wit, and in boyish haste,
Shook off the embrace and the scolding.

"Don't you know it's wicked, Jim?"
"Don't you know it's awful hot?"
He retorted, prim and grim;
"And a glorious bath I got.
"If you was as hot, I'll willingly bet
You'd go into your *bath-tub* and get wet;
So don't call *me* sinful and wicked!"

Argument availed not now.
After this clap of thunder,
To Jim's logic she must bow;
As Jim would say, "knock under."
For the rich and the poor must be purified,
In body and mind, by tub and by tide,
And God's agent is pure cold water.

How a City Invalid was Cured by a Night in a Farm-house.

BY AGNES VERNON.

A GREAT many years ago, when I was young, I had been suffering from a low nervous illness, which had reduced me to such a state of debility that I could hardly creep about, and though in no apparent danger, great fears were entertained that, unless something could be done to restore the tone of my nerves, I should sink into permanent invalidism.

Of course I had the best advice, for I was a petted youngest child, idolized by my father and mother and spoilt by my brothers and sisters; and of course the doctors looked very wise, and sometimes shook their heads ominously. They prescribed a course of tonics and cheerful society, with as much amusement as my poor fragile frame could bear; but it was all to no purpose. I did not get worse, but then I certainly did not get better.

I quite believe, though it is so long ago that perhaps I can hardly remember all I suffered, that I unconsciously hugged the state of weakness I was in, and really enjoyed all the fuss that was made about me. I did not intend to be selfish, but I was fast making slaves of all around me, and in a fair way of settling into that most disagreeable and odious of all beings, a weak, fanciful, affected young lady.

I have heard of a young lady being in such a nervous way, from which there seemed no possibility of rousing her, when her system was unexpectedly restored to its natural healthy tone by the breaking out of a fire in the house where she was staying; the shock and fright completely drew her from the constant contemplation of her maladies, and when she recurred to them she found they had vanished into smoke. I am afraid this was the state I was in, and nothing but a good fright or a great trouble would take me out of my selfish self. Fortunately for me, I was soon to have the former.

As I before observed, every means was tried to make me well, but without effect, and then change of air was recommended as a last resource. Then came the consultation as to what place I should visit. One watering-place was considered too hot, another too cold, another would be too quiet, another not quiet enough; indeed, the difficulties were tremendous. I was to have pleasant enlivening society, but must not be excited. I required to be strengthened, but must never be exposed to the least wind or cold:

a mild climate was most essential, but on no account must the air be relaxing. Sea-bathing was absolutely necessary, but my nerves could not support the shock of a plunge into the sea; and if I had a sea-water bath in my own room, all the invigorating properties which would be of so much service to me could not be imparted in so small a quantity of water.

Truly my case was perplexing; and the possibility of change of air without killing me on the spot, or bringing on some dreadful illness, seemed quite out of the question; and my last prescription was beginning to be only spoken of with extreme regret from the impossibility of its being carried out.

Things would have gone on in this unsatisfactory manner from week to week, without any chance of amendment, if all the difficulties in the way of the desired change of air had not been removed by an unlooked-for occurrence.

I had a very dear uncle, a country clergyman, who loved me as much as all the rest, but more wisely. He was a bachelor, living in a farmhouse in one of the southern counties. All his friends wondered he did not set up housekeeping; but he always said it would be time enough when he married. As every one knew Uncle Hugh was wedded to the lost love of his youthful days, they also knew that answer meant he would never leave the quaint apartments he had inhabited for years in the old-fashioned farmhouse.

Now this dear old uncle came to see us unexpectedly, to our great surprise, as he seldom could be induced to leave his hermitage, as we called his country home. As he did not give any reason for his visit, I concluded that, having heard of my precarious state of health, he came solely to see me; and when I was told he was coming to sit with me for a short time, I placed myself in a more languid attitude than usual on my sofa.

It was a lovely evening in July. The day had been sultry, and the heat had certainly tried me very much; but a soft breeze had sprung up within the last hour, and I was feeling more refreshed than I liked to allow when my dear Uncle Hugh came into the room.

I raised my head languidly, expecting him to inquire the first thing after my health. To my surprise he did no such thing, but coming

in briskly, kissed me, and said, "Well, Miss Annie, you are enjoying yourself after the heat of the day. I think I will follow your example;" and drawing a settee close to my sofa he threw himself at full length upon it, and gave a little sigh of relief as he gazed out of the window on the somewhat dusky-looking garden of the square in which we lived.

There were pots of lovely flowers in my window, which he soon noticed. These were as bright and fresh as though they were breathing pure country air, for as soon as a plant looked less bright than usual it was replaced by another from an expensive nursery, as it was considered bad for my spirits to have any thing near me but the best that could be obtained. There was also a splendid bouquet of hot-house flowers on my work-table by my side. I had a work-table near me because it was pretty, and my favorite vase of flowers looked better on that than any thing else, but I had neither strength nor spirits for work of any kind.

Uncle Hugh looked curiously at the pots of flowers, and then looked up with a half-amused smile as he said, "Upon my word, Annie, your flowers look as though they were reared and kept in the country, instead of the hot, dusty city. I suppose you do not trust them out of your own charge; no handmaiden, however dainty, could give the care to them they require but your little idle self. Well, dear," he continued, while I was getting more and more paralyzed with astonishment, "it is a beautiful and innocent occupation, but innocent as it is, it must not interfere with all your little-daily duties to those around you. I have known some young ladies carry love for their flowers to such an extent that there was nothing to be heard from them, morning, noon, and night but something about horticulture; till at last they became so selfish over this one pursuit that they forgot all the duties they owed to themselves and others, and became the most disagreeable and useless creatures I ever came near. But there, Annie," he said, seeing my eyes filled with tears, though from a very different cause to what I supposed he attributed them, "I did not mean to vex you, dear. I don't think you would ever be so silly as to let one fancy get the better of you; but it is well to be warned, for 'forewarned is forearmed,' you know, dear; and if ever you want to look after your flowers, or indeed any other pet amusement, when you ought to be doing something else, just think of poor Uncle Hugh."

I pouted somewhat at this speech, but made no answer, feeling too angry and injured at no

remark being made on my illness, to say a word.

The next evening Uncle Hugh came again, and after a hurried greeting said, "Well, Annie, I have settled with your mother that you shall go back with me to my hermitage. The heat of the city seems to have upset you a little, and we all think a little fresh country air and some farm-house living will set you up nicely, and make you as strong as a milkmaid."

"Uncle, Uncle," I gasped out, "what are you and mamma thinking about?"

"Thinking about, my dear—why, what do you mean? You need not be afraid of putting me to any inconvenience. I know I have a great many silly bachelor habits, but my little niece Annie will put up with them, I know; and I am sure my old Betty will wait upon you—that is, the little waiting upon that you will require—with as much propriety as if you were a princess."

I was fairly nonplussed—Uncle Hugh would not or could not understand why I thought I could not go and stay with him, and it seemed useless for me to try and explain. I sighed, and almost dried with impatience and vexation, while Uncle Hugh rattled on, quite unconscious of my uneasiness.

"Mind," said he, "I leave by the 10-30 train to-morrow morning. I would not have fixed such an early hour, but you know there is no railway in my remote regions yet; and when we have finished our journey at the great terminus at Green Bank, we have then a good stage-coach distance to go, and after that a nice little trot in my pony-phæton; so, unless we want to frighten Betty by arriving in the middle of the night, we must start rather early in the morning. Now, good night; I must be off to pack up, and leave you to do the same, for I own it is short notice. But there, you won't want much finery in my hermitage—two or three frocks that will wash, and a straw hat or two, will be quite enough. Good night again," said he, and off he went.

I felt more and more angry, and too indignant to answer, and walked away to bed as feebly as I could, secretly hoping that the excitement and annoyance would make me too ill to rise in the morning.

The morning came, and I felt much as usual—certainly not worse; so I suffered myself to be dressed in sullen silence.

I was very ungracious to every one when I took leave of them; and I now wonder they had common patience with me.

Dear Uncle Hugh came in a brougham, that

I might ride easily, though he said nothing about it then. We were soon at the station and off by the train, with little fatigue and no trouble to me—to my great disappointment, for I felt sure I should be sick with the exertion, and require a great deal of petting and attention, which would worry all about me as much as I could desire.

The railway journey was passed as such journeys always are; then came the stage-coach journey, which was very fatiguing, and I was too tired to feel pleased that I was likely to be quite laid up with the traveling, as I fondly hoped I should be when I left home. At the pretty country inn where the coach stopped, Uncle's phaeton was waiting, into which we were soon packed.

The coach journey was not ended till the long summer day was beginning to close in, and the greater part of our drive in the open carriage was by moonlight. It was a lovely country we passed through, in all the flush of summer. I had never been so far from home before, and was fairly entranced under the influence of the beauty of the night and the scene. I leant back in silent enjoyment, and forgot fatigue, illness, and temper.

After a time the scene changed; the country appeared barren, and we labored up many steep hills, and the country looked weird and ghostly in the moonlight. Uncle told me we were crossing the first of the celebrated chain of hills known as the Dipping Hills, from which by daylight there were glorious views. Not long after this we turned a sharp angle of the road, after having descended a considerable hill, and straight before us could be seen in the dim light the farm-house, sheltered in a basin formed by the surrounding hills. Dogs began to bark, but only barks of recognition and delight, for they all knew my uncle, and were greeting him with all their canine powers of courtesy and welcome. A boy opened the gate and led the horse to the door of the house, where old Betty was waiting to receive us. She seemed very pleased to see my uncle, and hoped the young lady was not very tired. We followed her into a low, dark passage, that seemed to be paneled on each side with black oak. There was no light in it but what the moon shed through the open door. Soon, however, a door was opened from one side, near the end, and a bright flood of light streamed out a welcome to us. In an instant we were in the prettiest, quaintest, and most comfortable room, half-study, half-drawing-room that I ever beheld. I can not describe it further than by saying it was per-

fect. Only one thing rather startled me—there was a bright fire, though it was the middle of July and the weather was unusually hot.

"Ah!" said my uncle, seeing me look toward the blazing hearth, "you will soon find that we want a fire among these hills, though we are so far south and it is midsummer. I am glad of the excuse, too, for I like a fire for company, and to burn odd papers when I am in the humor, as I often am in the evening when I am quite alone; but I must not keep you here talking. Here, Betty, take your young lady to her room and bring her down again quickly, for she must be starving."

Betty took a pretty china bed-candlestick from the sideboard, and opening the door, preceded me into the dark oak passage again, and opening another door at the end, I found myself in rather a large kind of hall, lighted only by one window at the side, through which the moon was shining. There appeared to be no lamp; so I suppose that when there was no moon it must have been pitch dark.

"This way, miss, if you please," said Betty, walking on to the end of the hall, away from the window, so that, but for the glimmering light of her candle she was almost in the dark.

I followed, but wondered where we were going, for I could not see any stairs or any outlet from the hall, except a door in quite a different direction from that which Betty was taking.

"Betty," I exclaimed, "where are the stairs?"

"Oh, if you please, miss," replied Betty, "master has had a nice step-ladder put here, for he doesn't like the trouble of going all round to the other end of the house where the stairs are. You see, miss, this door," pointing to the one I had already observed "shuts master's rooms all comfortably up from the farm folks and all that; and with this nice ladder to go up and down whenever he likes, he is as much to himself as if he had a fine city house all alone."

"Betty," I cried out, "how shall I ever get up and down that place? I never was on a ladder of any kind in my life;" and I fear I began to cry, for the long ladder, without even a hand-rail, looked very formidable, and as I looked up at the square hole in the ceiling, which was the ingress to the upper story, I was fairly frightened.

"Oh, you will soon get used to it, miss; the steps are all carpeted just like stairs," she said, pointing to a scrap of drugget at the edge of each step, which might look a little better than the plain wood, but certainly would not make the ascent more easy.

It was, however, no use to stop and complain

so I was obliged to scramble up in some way, and was safely standing on the upper landing, with rather less trouble than I expected.

Betty then led me to my bed-room, a very large room, with a low ceiling, and looking very gloomy, with an old-fashioned heavy-curtained bed in one corner, and on one side a large oak wardrobe, black with age, the doors of which Betty opened, and began stowing away my things, as my luggage had been already brought up. While she was so occupied I looked about to see where the windows were, for the room was so large that I expected to see three or four, but I could not find one. There was the great bed at one end of the room, the wardrobe stretched along the best part of one side, leaving little more than a space for the door, a fireplace at the end opposite the bed, with closet-doors on each side, and on the side opposite the wardrobe were toilet-table, basin-stand, and chaire, with a large looking-glass above them, in a carved oak frame.

At last I discovered a small window in the corner farthest from the bed, at the end of the side where the toilet was placed. I drew the curtain aside, but could hardly see a yard before me. The moon had sunk behind the hills and the sky, which had been clear and bright was overcast.

I was beginning to grumble again to Betty, but thought better of it, and being very hungry, I merely observed that I was ready to go down, if she would carry the light. I quite forgot the step-ladder in my surprise at the paucity of windows in my room, and when the door was opened and Betty advanced toward the square black hole into which we were to emerge in order to go down the ladder, I fairly started back with horror.

"Oh Betty, Betty," I said, "what shall I do? How shall I go down that dreadful place?"

"Never mind, miss," she replied; "don't be afraid. Here, give me your hand, I will take care of you, my pet. Why, master runs up and down here with his hands full of books and things, a dozen times in the evening sometimes, and almost in the dark, too, for he never will carry a candle. He says it is dangerous, but I think it is much more dangerous to burn papers as he does of nights, and all the sparks and sometimes lighted bits of paper fly up the chimney on to the thatched roof; but there, I suppose they are black enough before they reach the top, for master's study-fire smoked; so he has had a long chimney-pot put up."

"Never mind the chimney, Betty," I said, impatiently. "How shall I get down here?"

and I crouched down at the top of the ladder in blank dismay. It was, however, useless to hesitate; down I must go, and down I went; but how I did it that first time I most surely can not tell.

As soon as I was in the sitting-room again with Uncle Hugh, I began exclaiming about the ladder; but he looked up quietly, as if he did not in the least understand my fright, and only said, "The stairs, dear! Don't you like the stairs? Well, they are rather narrower than those you have been accustomed to, but you will soon get used to them. Now let us have something to eat. I hope you are hungry."

I was indeed very hungry, and made a hearty supper off the country dainties which had been provided for me. I was too tired to talk much, and soon said, "Good night," and went off with Betty to my room.

I managed to mount the ladder this time a little better, but still did it with great trepidation.

Betty was not long settling me in the great bed, and with a "Good night, miss; I hope you will sleep well," she left me.

If I had not been so tired I should have felt very lonely, but fatigue got the better of every thing, and I must have fallen asleep in a few minutes.

How long I slept I do not know. I woke with a sudden sense of danger. I started up in bed, and called out wildly for my sister; then, with a rush of thought, all the events of the preceding day came into my mind, and I remembered that I was far away from her and all at home. A good cry came to my relief, and I lay down again, thinking I was only frightened at waking suddenly in a strange place; but no, there was something wrong. There was a vague, undefined feeling of dread, and I sat up and listened, for what I could not tell, as I did not think I had heard any thing. It was quite dark; the moon had no doubt sunk long ago, and I suppose the black clouds I had observed when looking out of my little window had become more dense. The darkness was such as can only be seen in the country, when the atmosphere has no relief from artificial light.

Suddenly a flash of light shot into my room and disappeared as suddenly, leaving the darkness greater than before from the contrast. A storm of thunder and lightning, I thought; and no wonder, after the heat of the day. I listened for the peal of thunder, but as none came, I comforted myself with concluding that the storm was at a distance, and was just going to

lie down again when another gleam of light passed across the window.

I was now thoroughly roused, and shivered with fright. What could be the matter? Was the house on fire? or were there housebreakers trying to make an entrance, and just under my window, too? Oh, horror! What should I do? I tried to think, but could not. Then suddenly thoughts came thick and fast. No doubt it was fire. Uncle had been burning some papers, and the thatch had caught. Should I alarm the house, ring the bell, run down stairs? But if it were robbers and not fire, what should I do? Now I heard stifled voices under my window. Then voices a little louder, then flashes of light illumined my gloomy room again. Surely it must be fire, robbers would not talk.

What should I do? If I stayed where I was, I might be burnt in my bed; if I opened the window, I should perhaps be shot down on the spot; if I ran out of the room and gave an alarm, I might meet the ruffians on the stairs. There seemed no escape, no chance of help, and I groaned with fright.

I forgot to ask when I went to bed where my Uncle's room was, or where Betty slept. Perhaps I was told, but I had been too sleepy to hear or remember. Certainly, I did not know.

All this time I heard a low murmur of voices, and flashes of light kept crossing my window. Suddenly there was a tremendous noise at the door of the house, as I supposed—thumping, knocking, shaking, a shrill whistle, a great flash of light, and then total darkness again.

I sprang out of bed, and made my way as well as I could in the direction of the window, as I thought, but found myself walking against the fender and fire-irons, bruising my feet, and almost breaking my legs. Before I recovered from this, the knocking and shaking of the house door began again, and I made a desperate effort to reach the door of my bed-room, but I was so out in my bearings that I came crash against the basin-stand instead. Then came another flash of light, which, though it terrified me beyond endurance, helped me to find out the latitude I was in.

At last I reached the door, and tearing it open rushed out upon the landing, when suddenly I remembered the step-ladder. I had only thought of running down stairs, the ladder had quite escaped my memory. Here was horror upon horror. The house was either on fire or beset by thieves, and no one was awake but me, and I could not rouse any one. I stood as if in a frightful dream, spell-bound, with the perspiration starting at every pore.

I thought I heard a door opened and shut stealthily, close to me. I started with fright, and relief at the same time. I thought that some one was coming to murder me, or perhaps help was at hand; but no, it was neither. Then doors were slamming below, angry voices, hushed whispers, hurried footsteps, almost under where I was standing. Oh, if I could but find my uncle's or Betty's room! Strange they should not hear all this confusion; for, though somewhat subdued, it thrilled through my nerves, and seemed to me as though it would wake the seven sleepers. The agonizing, maddening thought flashed through my mind, that perhaps they had both made their escape at the first alarm, and had forgotten poor me; but such a dreadful thought could not long remain. Uncle Hugh would think of me directly he himself was aware of danger.

My head was throbbing as if it would burst with the intensity of listening and anxiety. I strained every nerve to catch every sound, yet dreading what I might hear next. Once, above the wild confusion below, I heard a rough voice say, "Mind, you will wake little miss." "Little miss" of course meant me. Oh, perhaps they had robbed and murdered Uncle and Betty, and knowing I could have nothing of value about me, would not molest me. What would become of me, left in this dreadful place all alone? The thieves must be in league with the farm servants, or how could they know any thing about me? Worse and worse, there could now be no hope of help.

I had not time to dwell long on this new misery, for sounds of increasing horror were now heard from below—moaning, choking, stifling sounds—as of wretched cattle dying amid smoke and flames; that is, I fancied so.

Had I been a screaming young lady I should have shrieked long ago in my terror, but with all my nervous nonsense I was never that. Fright always struck me dumb. Now I was not only dumb but motionless, and should have scared the bravest heart could I have been seen at this moment. My long black hair had come loose from its net, and was streaming in a wild disorder over my white night-dress. My face I am sure was colorless, and my eyes were starting from my head.

There was a short lull in the terrible confusing sounds, which was suddenly broken by the most fearful shriek I ever heard, followed by frantic scuffling, like some one fighting for dear life; and (oh! it was a sound which turned me sick, and chilled the blood in my veins, and made my heart stand still) I distinctly heard

the words, "Be quiet, or I'll stick you. What d'ye mean by making that row? Hold, Bill!—now he's gagged. Heave un in." Then I heard a smothered scream, and a heavy thud, like the falling of a helpless mass, and all was quiet again, but only for a few moments; the same awful sounds were repeated many times, till I prayed that I might faint away, or even die, that I might be spared the agony I was enduring; but unconsciousness would not come. I was fixed to the spot, with every nerve strained to the utmost, and feeling as though I had so stood spell-bound for ages, and should be doomed so to stand for ages more.

At last I heard, "There, we've settled 'em all. Now let's be off quiet." The house-door was shut gently, and I thought I heard the sound of wheels and horses' feet.

I rushed back to my room—the day was just beginning to dawn. I tore aside the window-curtain, and looked into the court below—but it was empty. I strained my eyes, but could not see any signs of footsteps, or any traces of a skirmish, as I expected. There was not light enough to discern any thing distinctly. I fancied I heard receding wheels and horses' hoofs clattering in the distance, but could not feel certain of any thing, and I think I was then about to faint. My head turned giddy. I grasped a chair near me, and had just sense and strength enough to summon up all my remaining energy, and made a rush for the bed, on to which I fell; and then I remembered no more.

When I again opened my eyes, I saw Betty sitting by the bed. The sun was streaming in through the little window with all its July strength, making the room look very cheerful, and lighting up the great quaint oak wardrobe, showing it to be a wonderful piece of carving, and by no means gloomy looking, except as to its color. There might have been a window or two more in the room with great effect, for all the bright summer sun could not take the bed out of a perpetual shadow; but still every thing looked much more cheerful than the night before.

I looked at Betty with astonishment at first, but by degrees remembered where I was; and when she asked if I had slept well, I rose immediately, and was soon dressed. While I was so occupied not a single incident of the night had come into my mind. I felt tired and bewildered, but thought (if I thought about it at all) that my fatigue was the result of my previous day's traveling.

When I left the room with Betty I started violently at the sight of the hole for the step-

ladder, and with a strange feeling of horror, which I could not understand, tried to laugh at my awkwardness in descending. When I entered my uncle's sitting-room I found all the farm household assembled for morning prayer. My uncle beckoned me to his side, gave me a silent greeting and a kiss, and immediately proceeded with the service.

When prayers were over the farmer's wife came to pay her respects to me, hoping I was not too tired—was sure I slept well, as she knew that bed was the most comfortable one in the house. I answered, as I thought, suitably, feeling very shy, but was roused from my shyness and every other feeling at the sound of a voice close to me, speaking to my uncle.

Turning sharply round, in fright and terror, though I did not know why, I heard the farmer say, "We's afeard we made a awful noise last night; but they pigs were that contrary, sum on 'em would run into house when we was hoisting of 'em into cart, and shruck as if stuck. We gagged 'em at last, and chucked 'em into the cart like sacks of wheat. Bill was quiet as could be. Hope little miss didn't hear; but 'spose your reverence told her it was pig-night, so she'd not take fright if she heard a scuffle. They lanterns, too, would flash up in wrong place."

Then all the night's agony burst upon my mind, and I broke down in a fit of uncontrollable laughing and crying. Every thing was explained to me—how the pigs were always taken to market at night, for the town in which they were sold was some miles distant, and it was necessary to leave soon after midnight, in order to be in time for the morning market; how piggies sometimes went off quietly, and how last night they wouldn't; how Uncle and Betty forgot to warn me that there might be a noise in the night, for they were so used to it that if all the pigs had been stuck and had shrieked their heads off, they would not have been disturbed.

Then, between sobs and laughing, I told all my terrors of the night, and in a few minutes laughter predominated, and my uncle pretended to be very much offended that I should have mistaken a set of gagged pigs, doomed to slaughter, for so many human beings.

I have only to add that my nervous illness was quite cured, though certainly by rather rough means, and such as no one would willingly have used.

I soon became familiar with the step-ladder, and used sometimes to frighten Uncle and Betty by dancing up and down it in the most daring and reckless manner.

Woodland Rambles.*

BY ELLEN R. MILES.]

I HAVE chosen for my theme, this evening, *Woodland Rambles*, partly because I think such rambles not only elevating to the mind, but very conducive to bodily health and vigor. Let us for a moment glance at the inducements which are held out to us to step aside from the ordinary cares and perplexities of every-day life, and drink in the health-giving, invigorating air of some of these delicious spring days. We naturally leave the crowded, busy streets, and are drawn, as if by a strong magnetic power, toward the grand old woods. If it be spring-time, as it now is, and the eye has become weary of gazing at naked branches, and the feet tired of treading the frost-hardened earth, or, as is too often the case, the body has lost its elasticity from long inaction and confinement in over-heated rooms, then will the woods have a charm for us which we may seek for in vain, elsewhere.

"Come ye into the grand old woods!
There entereth no alloy."

All that is found within these grand temples of Nature is from the hand of the great Master Workman, and will bear the close inspection of the most critical eye. How quickly will one forget his weariness as he listens to the first gush of melody which issues from the overfull throat of the red-breasted robin, as he tilts among the swelling leaf-buds, and almost cheats one into the belief that he is a breathing, vocalized blossom of spring-time, so bright is his plumage amid the tender greenness of the bursting foliage. Involuntarily, and often unconsciously we attempt an imitation of the bird-note, thus giving our lungs free and healthful action, and more fully preparing the body for the work which is in store for it. We almost forget the song and the singer, as our steps lead us along the woodland pathway in search of new beauties, which every spring unfolds. We may be too early for the sweet violet or anemone; but are we not fully compensated for the disappointment as our eyes rest upon a little knoll of ragged earth, and as we stoop to examine the tufts of emerald moss surrounding, and oftentimes crowning it, to find nestled among the greenness the brilliant berries of the

Mitchella, or partridge berry, while the scarlet leaves of last year's blackberry vine cling lovingly to the parent stem, only waiting to be pushed off when Dame Nature shall have seen fit to provide a suitable substitute. Thus we slough off the old life of an in-door existence through the "tedious winter" and give place to new springs of thought and action by coming in contact with woodland creations. I never was more fully aware of the beneficial effects of a ramble of this kind, than on the 11th day of December last. I had been trying to imagine myself ill during the morning, and feeling as if the clerk of the weather had made quite a mistake in not sending the snow in due season to cover the unsightly rubbish which usually collects in back-yards after a Massachusetts Thanksgiving, when my sister proposed that I should accompany her to the woods for ferns and mosses. Ferns and mosses! What could the child be thinking of! Ferns and mosses the 11th day of December! To show my willingness to please her, and my sisterly regard for her extreme want of wisdom, I robed myself in coat, hat, boots and mittens, and, armed with a trowel and a carving knife, we started. A brisk walk of a mile brought us to the woods in question. By the time I had climbed the first wall the ugly pain in my shoulder was entirely forgotten, and in fact had taken its departure. The uncomfortable chill which had vexed me during the morning had given way to a warm moist glow, and I found mittens and coat becoming quite burdensome. Rubbish no longer met my eyes; but every fallen trunk and broken tree limb showed evidence of the great Artist's handiwork. No lady's skillful fingers ever wrought such delicate lace work, as encased many of the moss-covered branches which strewn our pathway, and formed a misty covering for the gray old rocks. Each step brought us in close contact with some new miracle which we did not attempt to explain. It was enough to know (as the Apostle says) that "all things are for your sakes," and that we may ever approach nearer, though we may not be able to get at the center of all things. With every new beauty came added strength, and a desire to prolong our rambles, until we found ourselves on the outskirts of the wood, on the border of a swampy meadow, from the center of which gleamed scarlet tufts of vegetation

* An Essay read before the New Haven Hygienic Society, April 1, 1871.

from among the dry, brown grass. As we investigated the matter more fully, we found it to be the *Sarracenia*, or pitcher plant, which is among the most curious of our American wild-flowers. In early summer-time the petiole is usually filled with water, in which are myriads of drowned insects. To-day each crimson petiole held a globule of transparent ice. Each cluster contained from twenty to fifty or sixty of these hirsute, delicately-veined drinking-cups, which by the aid of our friendly trowel and carver we soon had in our possession, roots and all. La Place once said, that certain discoveries in mathematics had lengthened the life of the astronomer, by enabling him to realize new privileges and new delights. As truly may it be said that my woodland ramble on a chill December day imparted more strength and health to mind and body than the mere moping over the "cheerful anthracite," and inhaling its poisonous gases, could have done, even though it might have been thought more comfortable at the time. Suffice it to say that the products of that day's ramble carried joy, and gladness to many hearts beside our own; for after being skillfully and artistically arranged among ferns, and other woodland productions, they occupied a most conspicuous position at the Woman's Bazaar held in Boston during the Christmas holidays, and were then scattered far and near to cheer the invalid in her sick-room, and pervade the close atmosphere with a breath of woodland sweetness. If nine-tenths of our school-girls, who, after reciting a shabby lesson in French and German within the walls of an over-heated school-room, and then, after a dainty (?) dinner of roast turkey, plum pudding, mince pie, nuts and raisins, seat themselves in a lounging chair and study into the mysteries of the last new pattern of crochets or tatting, if they would but take a luncheon-basket on their arm, and go into the woods, and after doing full justice to the edibles, give as much time to examining the exquisite formation of the ferns, and the minute flowering of the various mosses as they would be likely to expend on useless and expensive fancy work, they would find that not only had their bodily organs received new impetus for activity, but the mental powers had been strengthened and enlarged.

Our dear Lord and Master deemed the lilies of the field worthy our consideration, and we have divine proof that "Solomon in all his glory" had knowledge of the trees, "from the cedar tree that is in Lebanon even unto the hyssop that springeth out of the wall." A writer in "The Intellectual Repository" sug-

gests that there is good reason to believe that the hyssop referred to belonged to the almost endless variety of mosses which add so much of artistic beauty to the rocks. In speaking of the tiny seeds of the moss, he observes, "When carried or blown against any moist and shady surface, they cling to it, and commence active life, and in a little while make it seem as if a coat of bright green paint had been spread there. * * * Since hyssop, properly so called, is neither an inhabitant of walls, nor so remarkable for diminutiveness as to form nearly so suitable a contrast to the cedar of Lebanon, it is pretty certain, at all events, that the allusion is made to something else; and the positive arguments are all in favor of its having been mosses of which Solomon spoke."

I have dwelt more particularly upon spring-time rambles, because this is the time of the "annual miracle," but one can derive benefit from woodland rambles at all seasons of the year. What can be more refreshing to the overtaxed brain and weakened body, than to throw aside all care of household duties and study confinement, and spend a day with a congenial companion, in the midst of the beauty of the summer woods. One needs no book; for is not the great "Book of Nature" open to us, speaking audibly in the musical rustle of the leaves, in the tall tree-tops, in the rippling brooklet which flows at our feet, and in the hum of the myriad insects which flash in the sunlight? At such a season one drinks in the very "Elixir of life." Autumn presents no less attractions than does the queenly summer. She spreads her many-colored carpet beneath our feet, and woos us with her mild breezes to take a new lease of life by a stroll among her varied landscapes. Looked you ever through stained windows of richer coloring than those through which you gaze as you enter the autumn woods and look up to the clear, blue sky? Did your feet ever enter a grander cathedral? Transept, nave, and choir are not wanting; and while the soul bows in reverence to the great Overheart, the body gains refreshment from open air and sunlight. Did you ever go into the woods after one of those spring snow storms which sometimes come even after we have begun to look for spring blossoms? The keen, frosty air may make you shiver for a few moments, but all discomfort is soon forgotten, in the beauty of the scene before you. Like a fairy palace is the grand old wood! No tessellated pavement of Roman antiquity can vie with the matchless "Carara" which is broken here and there only by the tiny, geometric tracks of the rabbit.

Snowy arches lighted up by the bright morning sunlight, over which bend the branches of the tall, stately pines whose massive trunks look like grim sentinels guarding the entrance to this palace of beauty. Every thing within range of our vision has received a pure baptism, while over all hangs the clear, blue dome of heaven. Can one look upon a scene like this and not feel his whole soul go out in love and adoration to the good Father who has made us only a *little* lower than the angels? Let us look well to it, that we keep our bodies in a condition, by proper exercise, and a personal contact with the beauties of the outer world that they may indeed be *fit* "temples of the Holy Ghost."

WHAT HAPPENED TO THE LITTLE BOY WHO WOULD SMOKE.—Frank was really as tender-hearted a boy as you could meet; and having neither brothers nor sisters, he made companions of his pets—his canary birds, his tame hare, and his rabbits—and not once had they had it in their power to complain of neglect or unkindness from their young master. They knew nothing of his faults, poor things, nor anticipated the cruel fate his weakness of character would bring upon them before long. It was the coachman's pipe, lying on the window-sill outside the shed, that was the beginning of the trouble. The pipe, the match-box, and the tobacco-pouch. Frank saw them all, as he walked past the window to replace the broom in the harness-room, from where he had taken it, and as he saw them, the sneer of the boys came back upon his mind; so, contrary to express commands issued both by his father and mother, Frank, having laid the broom aside, returned and gathered them all up in his hand—pipe, matches, and pouch—and looking around for a safe hiding-place, where he could indulge in his disobedient pleasure, he climbed the ladder leading to the loft above the shed, and sat down among the hay to try what a real smoke was like—not a brown paper one. "I'm not getting sick, not I," said Frank, by-and-by, as a very strange feeling crept over him, and the clouds in the sky opposite the barn-door seemed to be heaving, and the world generally going round, "I'm not going to be sick, not I," but for all that, Frank put down the pipe hastily and walked toward the loft window. The loft was spinning round now, and the yard beneath was moving about. Frank felt that he must get into the house somehow; he must get in and lie down on his bed, for his head for some rea-

son had begun to ache horribly, and into the house he did eventually make his way, though it remained always a matter of wonder to himself how he escaped without broken bones in his perilous descent from the loft window. But, as I said before, he reached the house somehow, and lay down on his bed, where, notwithstanding his boasts, he was very sick and very sorry. He shut his eyes, poor boy! and endeavored not to see any thing, but to try if he could get to sleep. He did get to sleep at last; he had just fallen into a doze, he was dreaming of Alfred West struggling in the fire to save the woman and child, he was dreaming of the flames and the smoke, and the cry of "Fire!" when he was awakened from his sleep by the very cry he was dreaming of—"Fire! Fire!"—he thought he must be still dreaming, till he jumped from his bed and looked out of the window, then he saw it was no dream, the loft outside the yard was all in a blaze, and the smoke was pouring in thick columns from the window of the rabbit-house. Frank staggered down the stairs, with aching head and giddy step, and made his way into the yard; for, with the first sight of the flames issuing from the barn window the conviction had forced itself on Frank's mind that the pipe so hastily dropped into the dry hay had been the cause of the fire. All the men in the place were gathered round the loft, in which was packed the whole hay of a season. In vain Frank called to them to put down their buckets of water and save his rabbits. In their anxiety to save their master's property, they did not heed him. So the poor rabbit's came to an untimely end, and the old hare perished in her blindness, and the barn was burnt down, and the precious hay destroyed—all through the cowardly desire to keep faith with a cowardly boast, and long was the bitter punishment that ensued. The news of the stolen pipe and the burnt rabbits traveled with quick and certain footsteps to the school, where the nickname of "Not I!" was no longer whispered beneath their breaths, but became the well-known cry of the boys whenever Frank appeared among them.—*Ex.*

SILENCE.—The finest nations of the world—the American and the English—are going all away into wind and tongue. But it will appear sufficiently tragical by-and-by. Silence is the eternal duty of man. He won't get to any real understanding of what is complex and pertinent to his interest without maintaining silence.—*Thomas Carlyle.*

Growing Old.

BY FRANCES KELLINGWOOD ABBOT.

IT is exceedingly immoral to grow old. Perhaps old age may be justly set down as the unpardonable sin. It should be the prerogative of an immortal being to be always young; eternal life without eternal youth would be the heaviest of curses, as is beautifully taught in the old Greek fable of Tithonus. I never wish to see an "aged" person. Old age, like an iceberg, radiates cold as it were in all directions, and sinks the temperature of every soul that approaches it. Shakspeare was wise when he said, "Youth and crabbed Age can not live together;" like darkness and light, the one always expires on the advent of the other. The presence of an old man or an old woman makes the soul frost-bitten, unless its youthful fire is hot enough to thaw out the snow and ice of time.

In Gulliver's Travels, Dean Swift makes his hero visit the kingdom of Luggnagg, in which was found a number of people that never died. They were called *struldbrugs* or immortals, and were distinguished by a red circular spot over the left eye. They commonly acted like mortals until they came to be about thirty years old, after which they became melancholy, and lived in this state until four-score, when they entered on a peevish, covetous, talkative, second childhood that never knew any end. Without memory, they passed through centuries on centuries of, wretched dotage, envying equally the young who could enjoy, and the old who could die and thereby cease to suffer. Equally hated and despised, they differed from mummies chiefly by the power of motion, and grew more and more repulsive with the lapse of years. By this quaint fancy Swift exemplifies the intrinsic misery of old age, the unspeakable disaster of arrested development. Every old person, from the nature of the case, is a *struldbrug*, and appears among the youthful like an exile from the kingdom of Luggnagg. I know not which to call the greater—the calamity, or the crime of growing old.

But let me not be misconstrued. Gray hairs do not make one old, nor a wrinkled forehead, nor crow's-feet about the eyes, nor the deep furrows of Time's plow about the mouth, nor a bent back, nor a palsied arm, nor the feeble steps that totter toward the grave. Neither can you reckon the age of a man, as you do that

of a horse, by looking at his teeth. Scan the body as closely as you may, and if you can not look through the body into the soul, your estimate of age is the wildest of all guess work. Many a soul seamed and corrugated by the lapse of time, looks out at you wearily in the face of a mere boy, as the calendar would rank him; and many a soul, fresh as the May-flower in earliest spring, shines through the weather-beaten features of the patriarch. Our bodies are the masks of character. The census-taker in the "kingdom of Heaven" will never inquire for the date of your birth, have no transactions with the town-clerk, consult no parish register, care nothing for the record in your old family Bible; he will measure your youthfulness by yourself alone, and take no more account of your carcass, in calculating your age, than of the coat you wear on your back. A thread-bare garment makes no one aged—neither does a worn-out body. The body *must* grow old, and fall to pieces; its fabric is frail and its texture loose. But it is against nature for the soul to grow old. Your body is not you, except as your glove is a part of your hand, or your boot of your foot. There should be no more loss of youth involved in the casting off of an old body, than there is in the discarding of a ragged waistcoat. When decrepitude strikes deeper than your flesh and bones, it is because you have suffered the fountain of youth, which God unseals in every heart, to be choked up with rubbish and dirt. The youngest man I ever knew was by the almanac more than eighty years old. How beautifully serene and placid was that furrowed brow! How fresh and hearty used to be his laugh, how genial his conversation, how pure and unpoluted his daily life! Little children instinctively nestled in his lap, and smiled trustingly in the kindly old face that revealed a soul childlike as their own. Sympathy with all that is sweet, noble, and true, illuminated every feature, and cast the glory of a summer sunset about a well-spent life. Though the frosts of winter had whitened his head, his heart was warm and lovely with perennial spring. One could not meet him without being cheered as if by the song of birds and the fragrance of fresh violets. He often spoke cheerfully of death as not far

off; but who could see or hear him, and not feel that he was too young to die? And, indeed, he was too young to die—I think when I remember the vitality of his spirit, that he never died, and will never die. The last time I saw him, he lay on his bed, never to rise in his old health again; his long white locks streamed over his shoulders, and, as I kneeled at his bedside, he laid his trembling hand upon my head, blessed me, and with a feeble voice prayed a few simple words to the Father in Heaven. Never did a prayer ascend from a more youthful, a more child-like spirit. When the useless and worn-out body was laid away for ever, there never was set free a soul more fair and fresh with the bloom of eternal youth.

"How old art thou?" It is well to pause now and then, and put this question home to ourselves. Youth is growth. Old age is simply cessation of growth. To advance, to improve, to enlarge the sphere of our being day by day, is to be young; to stand still, to retrograde, to contract into a smaller volume—this is to grow old. Youth is spiritual progress or development; age is spiritual retrogression or decay. This is what I meant at the outset by saying that it is immoral to grow old. We have no business to surrender the grand privilege of perpetual advancement. The body grows old because it is created to grow awhile, to be mature awhile, to decay awhile, and then to perish; but the soul flies in the face of its own nature ever to pause in the ascent toward perfection. Aspiration is the secret of youth, and the proof of it; the soul that persists under all defeats and disappointments, in aiming at higher good and vaster truth, shows the elastic vigor and fresh bloom, which are the index of increasing vitality. But to halt, to accept defeat as final, to turn away from the hope and toilsome task of spiritual amelioration, is to begin the soul's decrepitude. Youth is aspiration—age is desperation. Look in upon your own heart, estimate the fervor of your longings for greater goodness and the strength of your efforts to realize it, remember that these longings and efforts are the index of your age—and then answer silently your own, self-put question, "How old art thou?" Old age has nothing to do with the body—it attaches to the soul alone, if it truly belongs to you; and if that is getting infirm and gray, wrinkled, palsied, and decrepit, it is time to fill its veins once more with fresh tides of life.

I once had a piece of gum-copal, yellow and transparent and clear, in the center of which was a spider, embalmed in a sepulchre of sur-

passing beauty. I care not how prosperous or magnificent may be one's external condition, if his soul is superannuated, he is not one whit better than the spider in the gum-copal. If you are empty of earnest aspiration and effort as earnest, then depend upon it that the more dazzling the splendor of your outward prosperity, the more conspicuously you are entombed in your own success.

Men's souls grow old in many ways. Some eager to enjoy, and reckless how they enjoy, barter purity for pleasure, and even in youth become superannuated in soul—lose all faith in goodness and all desire to achieve it, and live a life of seeming debasement. To such, life, like premature fruit, ripens fast because worm-eaten. He who yields to passion piles century after century on his soul, and even in early manhood stands whitened by the multitude of his years. Of all octogenarians, the old young man is the dreariest and saddest to see. Enthusiasm replaced by cynical contempt for virtue, hope supplanted by *ennui*, every high purpose sapped and destroyed by self-indulgence, the young profligate is a graybeard before his prime; the delicacy and beauty of youth are lost, and, cheating himself into the belief that he is a thorough man of the world, he has only made himself a precocious dotard.

Many men grow old in mind, by simply standing still. In early life they form opinions, which, though honestly adopted, they fail to revise in the added light of experience and fresh thought. Prejudice steps in; and, becoming committed to the defense of these opinions, they make it a point of honor never to strike their flag. It is only the growing mind that will consent to call in question its own preconceived notions, and give to new thought a candid and hospitable hearing. Perhaps timidity and policy cast their chains about the mind, and rob it of its youth. To let expediency or fashion slip into our thought, and give the casting vote between the old and the new, makes the soul rapidly grow aged, and afflicts the spiritual eyes with a loss of sight, which no lenses can repair. Youth is courageous and pays no heed to the seductions of self-interest or conformity; it is charmed with the grand perspective of truth, and gazes with throbbing heart upon its vast plains and lofty mountains. It listens to no temptations that appeal from without; it hears only the impulses of the Divine Spirit within, which urge it to reverence supremely, the true, the beautiful and the good. But Age is little concerned except for ease, enjoyment, respectability; and, steal-

ing prematurely into the young man's heart, it strikes with paralysis every enthusiastic aspiration for truth alone.

Old ministers often complain that they lose their hold on their audiences, and are ungratefully used; but commonly the fault is their own. No man has any business to be an old minister; if he keeps his heart warm and fresh with noble sympathies, and keeps his mind candid and active by the steady pursuit of truth, he will be a boy still at the end of ninety years, and find himself heard with ever increasing respect and affection. The ministers who are dry and tedious, and complain so much of want of appreciation, are commonly men who grow early old, who are afraid to speak out their best and boldest word, and so cease to speak from their own enthusiasm and deepest faith. They are fossils. Let a minister utter always his best thought, and, poor as may be his eloquence, he will find willing hearers. The young, growing spirit is ever in sympathy with growth; an electric current runs from every live speaker to every live hearer, and from the hearer back to the speaker again. The pews little know how much they make or mar the inspiration of the pulpit. The thought of one eager, hungry, receptive listener, one soul that thirsts and waits for a living word, will inspire the preacher in his solitude and call out his best truth, his deepest feeling. But alas for him who must address himself to an old audience, an audience whose souls are not fresh with the life of youth and growth! His thoughts that rise are congealed again at their source; and the finer experiences of his soul refuse to voice themselves to careless ears.

Men grow old in conscience also. They obey lower law, and suffer the voice of God, ever undying, to be drowned in their own attention. How easy it is to grow complacent over one's own goodness! We accept the customs of men for the laws of God, and find that yoke so easy that we fall in love with our own very respectable virtue. We suffer our souls to get to a moral dotage, and then applaud ourselves for our own excellence. Conscience grows fearfully old, if we suffer its warnings to be overborne by the invitations of profit or fashion or inclination; it mumbles over its unheeded admonitions and seems sometimes in the last gasp of consumption. But though suffered to become old and disregarded, conscience can not die. It is the numbness of old age that befalls her, not the coldness of death, and new tides of immortal joy may yet course again through her tepid veins. When we adopt the world's ethics, and render the high commands of conscience to har-

monize with the easy code of Mammon, we grow gray in worldliness, and heap the years of the Pyramids on our own heads. Folly of follies! Conscience is not extinguished after all, and will yet revive to show us that the wisdom of selfishness, with all its ill-got gains, is moral lunacy and dotage. Keep your conscience young, whatever grows old within you; let that at least wear the amaranthine wreath of perpetual youth.

Men grow old in their affections also. Many a generous boy with chivalrous and noble instincts ends by becoming a cold, hard, suspicious, utterly heartless man; he scoffs at his early dreams as nonsense, and chooses even his friends from business motives. This decay of the heart is a melancholy spectacle. The prosperity which demands so costly a sacrifice is not worth the price paid for it. Frequently, also, the most beautiful ties of life are suffered to perish by mere neglect. How many a household is blasted for all earthly happiness by a cold omission of every thing that expresses love, until by this mere omission, poor love is frozen to death! Untold domestic misery springs out of a carelessness of treatment which makes the souls of husband and wife grow old with frightful rapidity. Every impatient word writes a wrinkle on their souls; every selfish disregard of each other's comfort blanches a cheek; every side-thrust of pique or ill-temper steals a tint from the cheek; and before they know it, all the beauty of early love is gone, and two peevish, selfish, unhappy people are compelled to endure the discomfort of each other's old age. They may be still young in years, but their happiness is largely destroyed because they have not cherished the delicacy and tenderness and unselfishness which are the beauty of love, and without which marriage becomes the worst of handcuffs. The importance of *simple courtesy* in a home can not be over-estimated; there should be a chivalry of devotion, a thoughtfulness of attention, to obviate the little frictions of life, and prevent mere trifles from becoming thorns and torments. Keep the heart young; let not the fair flower of home happiness perish from want of a little watering and tending; let the radiance of genuine love grow only mellowed and softer with each passing year; and thus guard jealously against the invasion of old age where old age should never be allowed to come.

Youth—fresh, warm, generous youth—let us keep that always as the very life of the soul. No standing still, but progress in all that is fair and good, pure and true; growth upward and outward, in mind, conscience, and heart.

STUDIES IN HYGIENE.

WATER.—If any reader will give his attention for a few minutes to the subject of water, if he will inquire for what purposes it is indispensable, and in what quantities it is used every day, he will arrive at a realizing sense of the importance and interest connected with the subject. In the city of London the number of gallons used daily for all purposes, equals about twenty-two per head for the population; in Glasgow, fifty gallons per head; in Paris, thirty-one, and in New York, much more than either of these, but in New York the amount wasted on docks and piers is greatly in excess of the European cities. An adult man who labors hard, requires daily about three quarts for nutrition. A man whose labors are light, does not require more than half so much. About one-third of this amount is taken in the daily food, and the remainder must be supplied in the form of drink. Women drink much less than men, and children less than either, though in proportion to their size, they use more than men or women. In hot weather, more is required than in cold, and a laboring man needs more than an idle one. Dr. Parkes, author of "Practical Hygiene," measured the amount used by many soldiers, and gives the following sum used by a man of the middle class, who he considers a fair type of a cleanly, healthy man belonging to a cleanly household: Cooking, 8 quarts; drinking, $1\frac{1}{4}$ quarts; ablutions and sponging, both, 5 gallons; for washing cooking utensils, 3 gallons; for laundry, 3 gallons—Total, a little over 12 gallons.

For a full bath in a bathing-tub forty gallons is a moderate estimate, and for a Turkish bath one hundred gallons may be required. In ancient Rome, Leslie calculates the amount used for each person in the public baths to have been not less than three hundred gallons, but these baths were the largest in the world, and were conducted on a scale of luxuriance nowhere

else known. Parkes estimates the amount of water required for all purposes, including sewers and closets, at twenty-five gallons per person, as the least amount that ought to be used. These estimates are for a city population and for the country perhaps a little less would suffice.

A horse requires from six to ten gallons daily. A cow or ox fed on dry food requires from six to eight gallons.

In water-cures and hospitals, nearly double the quantity used in private houses is necessary.

CARE OF THE HEALTH IN HOT WEATHER.—In hot weather the process of fermentation and putrefaction are greatly hastened, and any thing not readily digestible or in any way inimical to the system, taken into the stomach, acts more rapidly and injuriously than in cool weather; so the character of our diet is now of the utmost importance. In the coldest climates of the North, and during winter, a diet composed largely of animal food is allowable, if not best; but here, especially in summer, meat should be sparingly eaten, and such abominations as fried bacon and "long collards," soaked in grease, should be utterly avoided by all white people, whose too sedentary habits are not favorable to the digestion of such food. We are sorry to be obliged to say any thing against the established diet of the country, but we are thoroughly convinced that fried bacon and hot bread have far more to do with the sallow complexions and bilious condition of our people than their warm climate. Our earnest advice is, eat but little meat during the summer, and let that be beef and mutton, especially the latter, if you can get it, and to enable all to do so, every farmer should raise sheep.—*D. H. Jacques, Charleston, S. C.*

HYGIENIC TREATMENT OF CRIME.—Every State prison, like every lunatic asylum, should be administered medically, not politically. A criminal should not be let loose upon society simply because he has been confined during a period prescribed by law; he should be kept under the control of competent physicians and

treated by them till he is cured of his criminal tendency; and if he is not cured, he should not be released. A man is afflicted with a disease of mind which prompts him to steal; he is sent to prison five years; he serves his time, comes out, and steals again; he goes back and serves five years more; and nothing having been done meanwhile to cure his disease, he comes out with the same disposition as before. This is the ordinary worthless result of prison discipline—a system which, instead of repressing crime, fosters it, and instead of reforming criminals, makes them worse. We repeat that a State prison, like a hospital, or an insane retreat, or a reformatory, should be under scientific and not merely didactic administration.—*Golden Age*.

PANDORA.—

"Who's Pandora?" Famous woman!
As the story-tellers state,
She was curious and human,
Much like folks of later date.
Jove once gave her for safe-keeping,
Sad misfortunes in a box.
Pan could not forbear to peep in,
So she went and picked the locks.
Troubles then began to travel
Round and round the wretched world,
And a dreadful lot of gravel
Into people's eyes they've hurled.
They are going worse and worse on!
Pan, why did you let them out?
They are not the sort of person
'That we care to have "about."
Oh, Pandora, most unfortunate,
Thus to vex unhappy men!
Take your crew of cares importunate,
Kindly box them up again!

—*Selected.*

DOES AND HEALTH.—This is the subject of an interesting article in a Belgian medical journal of recent date, from which we collect a few facts. A knowledge of perfumes has been to the most remote antiquity. The use was made of them in the time of Moses. They were highly esteemed by the Greeks in the time of the wise but rigorous Solon. Their use was carried to excess by the Romans; and now, in our time, they appear to have attained at their utmost perfection and delicacy. Perfumery has been reserved also for the present day to be used in the greatest profusion. But if the perfumes that are everywhere found, and can be produced by certain processes, may be used with discretion, this can not be said in every case of the

odors that are naturally exhaled by flowers, leaves, or fruits. Their action on the economy in a limited space, and especially during the night in a closed chamber, deserves to be noticed. It manifests itself by serious disorder, headache, syncope, and even by asphyxia if their action is too long prolonged. In nervous persons numbness may occur in all the members, convulsions, and loss of voice, but in general only a state of somnolence, accompanied by feebleness and retardation of the action of the heart. This state is often associated with well-marked dimness of vision. Among the flowers that are most deleterious may be mentioned the lily, hyacinth, narcissus, crocus, rose, carnation, honeysuckle, jessamine, violet, elder, etc. In addition to the danger caused by their smell, should be mentioned their action on the air. During the night, flowers actively produce carbonic acid, which is injurious to health. Magendie even cites a case of death caused by a large bouquet of lilies, which the sufferer, a previously healthy woman, had in her bed-room while sleeping. Among the more dangerous plants may be mentioned the walnut, the bay-tree, and hemp. The action of these is well-known, the latter indeed producing a kind of drunkenness.—*Journal of Chemistry*.

MARRIAGES THAT PROPAGATE DISEASE.

—A sickly frame may be originally induced by hardship or intemperance, but chiefly by the latter. It is impossible, that a course of vice should not spoil the best constitutions; and did the evil terminate here, it would be a just punishment for the folly of the sufferer; but when once a disease is contracted and riveted in the habit, it is entailed on posterity. What a dreadful inheritance is the gout, consumption, or scrofula, to transmit to our offspring! How happy had it been for the heir of many a great estate, had he been born a beggar, rather than to inherit his father's fortune at the expense of inheriting his diseases!

A person laboring under any incurable malady ought not to marry. He thereby not only shortens his own life, but transmits misery to others; but, when both parties are deeply tainted with scrofula and the like, the effects must be still worse. If such have any children, they must be miserable indeed. Want of attention to these things, in forming connections for life, has rooted out more families than plague, famine, or the sword, and as long as these connections are formed for mercenary views, the evil will doubtless be continued.—*Dr. H. J. Broadwell*.

RECIPES FOR WHOLESOME COOKING.

PREPARATIONS FOR INVALIDS.

No. 1. BARLEY BROTH.—Wash in warm water, and steep a small table-spoonful of pearl barley in fresh water three or four hours, adding a little salt; pour off the water, and set the barley on the fire in a pint of water; put in a table-spoonful of bread-crumbs, one or two sprigs of parsley, and a little mace; simmer till sufficiently done, and then strain it through a fine tin strainer.

No. 2. BREAD SOUP.—Set a pint of water on the fire in a clean saucepan, adding a dry crust of bread, cut in small pieces, a little fresh butter, about the size of a walnut, and a little salt; let it boil, beating it with a spoon till well mixed, and boil it gently a quarter of an hour.

No. 3. BARLEY WATER.—Wash two and one-half ounces of pearl barley; steep it in cold water several hours; put it into a pan with a little boiling water, and after boiling a few minutes, pour off the water; then add two quarts of boiling water; let it boil till reduced one-half; then add sugar, and flavor with lemon peel or raspberry vinegar.

No. 4. RICE WATER.—Wash and pick two ounces of rice; set it on the fire in a quart of water; boil gently till the rice is quite soft and pulpy; rub it through a hair sieve, and sweeten with honey or sugar. Lemon juice may be added.

No. 5. SAGO SOUP.—Three ounces of sago, and two turnips. Soak the sago a few minutes in cold water; then boil it gently about two hours, with the turnips cut in small pieces; season, and serve with toasted bread.

VEGETABLES.

All green vegetables should be as fresh as possible. Put them into cold water with some salt in it, for about ten minutes, to clear from soil or insects. If not quite fresh, let them remain in the water some time longer; drain in a colander, and put them into a pan with plenty of boiling water, adding salt, and a small piece of soda; cover the pan till boiling, but not afterward; then boil quickly, and carefully remove any scum which may rise. Do not allow them to remain in the water after they are done, but immediately drain them in a colander, and finish each kind as directed in the recipes. Peas and spinach do not require so much water as most other green vegetables, but only just sufficient to cover them. Cauliflowers and broccoli require especial care in boiling, as the flower is easily broken and their appearance spoiled; boil them quickly for a few minutes, and then moderately till tender, which may be easily ascertained by trying the stem with a fork. All vessels used in cooking vegetables should be particularly clean. Soft is preferable to hard water in cooking all kinds of vegetables. Potatoes are in universal use, and yet how few know how to cook them well! A

well-boiled potato is a thing purely ideal—it has never come out of the pot, in the experience of living man." This is too strong; but there is very much room for, and need of improvement in the *science of cooking a potato*. To do it well, the matter must be studied, and not performed by routine. They differ very much, even those grown in the same field and from the same seed. A good potato, well-cooked and served up, is a luxury, which unfortunately few people know how to accomplish, or will not give themselves the trouble to do.

No. 1. POTATOES.—Those grown on virgin soil, of a middle size, and floury, are to be preferred. They should be as nearly as possible of one size, well washed, but not pared. They should be put into a vessel of cold water for an hour, then put into fresh water, and boiled in a kettle or saucepan, closely covered, in the most expeditious manner possible; or they should be steamed, which would be still better. If boiled, no more water should be used than merely to cover them, as they produce a considerable quantity of fluid. When they are done, the water should be *instantly poured off*, and the kettle containing the cooked potatoes be placed on the side of the fire with the cover on, and a cloth over them, until the steam is absorbed, and rendered quite dry and mealy before they are sent to the table.

No. 2. MASHED POTATOES.—Pare and wash the potatoes; put them in a pan with cold water; boil slowly and carefully; dry and mash them with a potato-masher till quite smooth, adding a little salt and hot new milk, with a little butter melted in it; beat them well with a fork; put them into a hot basin, and turn them out on a vegetable dish.

No. 3. BOILED CARROTS.—Wash and brush the carrots; boil them in plenty of water till quite tender, adding a little salt; rub off the skin with a clean cloth; cut them in slices, and serve with butter sauce.

No. 4. STEWED CARROTS.—One pound and a half of carrots; one ounce of butter; quarter of an ounce of parsley; one tea-spoonful of flour, and four table-spoonfuls of cream. About half-boil the carrots; then scrape and slice them; put them into a pan with half a tea-cupful of vegetable broth, or water; let them simmer till quite tender, but not broken; add the chopped parsley, and stir in the flour and butter, previously mixed; simmer them ten minutes longer, and serve immediately.

No. 5. HARICOT BEANS.—Soak them all night in soft water, boil them one hour, and then strain the water from them; add fresh boiling water, and boil them gently till done without breaking. Serve them with turnips, parsnips, artichokes, or broccoli and bread sauce.

No. 6. BEANS.—In shelling the beans, take off the green ends, and when washed, drain them in a colander; put them into a pan with plenty of boiling water, adding salt; boil them till tender; drain in a colander, and serve with parsley sauce.

EDITORIAL DEPARTMENT.



NEW YORK, JULY, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as *indorsing every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

EXCHANGES are at liberty to copy from this magazine by giving due credit to THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

LESSONS FROM PETER COOPER.—Peter Cooper, now eighty years old, still active and useful, one of the successful business men of this great city, and still more, one who has shown his ability to use his great wealth for the good of his fellow men, by founding a great institution in New York dedicated to science and art, where working people can resort without money and without price, and obtain such knowledge of their business and of science as is indispensable to a successful career, sends us the following very valuable lessons from his life for the readers of THE HERALD OF HEALTH:

"While yet a child, I learned that the 'hand of the diligent maketh rich,' and whatever of wealth I have achieved, has been due primarily to habits of patient industry formed at the outset of my career. I soon learned that 'waste makes want,' and I therefore saved what I earned; and, by taking 'stitches in time,' guarded against the loss which unavoidably attends upon neglect and want of foresight. It did not take long for me to learn that drunkenness was the parent of the larger portion of the poverty, vice, and crime which afflict the American people; and hence, until advancing age seemed to demand moderate stimulants, I carefully avoided alcoholic liquors as the greatest curse of the young, and the most deadly foe to domestic happiness and the public welfare.

Next, I observed that most of the shipwrecks in life were due to debts hastily contracted, and out of proportion to the means of the debtor; hence I always avoided debt, and endeavored to keep some ready money on hand, to avail of a favorable opportunity for its profitable use. With economy and industry it is easy to do this in this favored land, and in my case the result has been that, amid all the financial revulsions through which I have passed, no obligation of mine has ever been a day in arrear. Debt is a slavery which every young man ought to avoid, or if assumed, ought not to endure for one day beyond the shortest time necessary to set him free. Shunning intemperance and debt, and practicing industry, rigid economy and self-denial, it was easy to be honest, and to acquire such knowledge as the opportunities of this city offered in the days of my youth.

I was cheered, comforted, sustained, and encouraged by the greatest of human blessings, a diligent, wise, industrious, faithful, and affectionate wife, aided by the earnest sympathy and active coöperation of my children, who justly regarded as the richest portion of their inher-

itance, that portion of my wealth which I desired to consecrate to the public welfare. Hence my last lesson for the young is to marry at the proper age, when, and not before, they can see their way to a decent and comfortable support, and thus fulfill the first law of nature with a high and holy sense of its happiness, and its duties, the greatest and most serious in the path of life. Love and duty I have ever found to be the 'passwords' of all that is true and noble in life, and when they are separated, the fires on the family altar die out, and life loses all its charms, never to be compensated by the false jewels which are often worn in the public gaze.

Reform, to be of any permanent value, must be based upon personal virtue, not force; and it seems to me that the millenium will not be far off when each individual shall set about reforming himself, rather than society, and conforming his life to the great law of loving God and his fellow men.

PETER COOPER."

EVILS BESIDE INTEMPERANCE. — The Nation, in answer to a letter on "Total Abstinence," makes the following truthful remark: "We believe, for instance, that a large proportion of the vice and crime of the world, drunkenness included, and of the feeble and inefficient performance of daily duties is due to bad digestion; and though this is very well known, and the ways of improving digestion are very well understood, the number of people who make any persistent and energetic effort to improve their digestion, or keep it, is very small. The singling out of drunkenness, therefore, as the root of our social troubles, and the one excess on which we need to expend our energies, is open to the objection of all panaceas."

In other words, it would be quite as pertinent to direct social reform against dyspepsia as against drunkenness. Dyspepsia is a greater evil to society than intemperance, therefore, let our warfare be directed against the former rather than the latter. The only objection we can see to this is that it would be impossible to

make the change without great loss of time, and reform force. Some reforms have precedence over others, not because they are more important, but because they have come before the public first, and public attention is more directly given to them. There is not yet enough surplus moral force or reformatory energy in society to attack and carry forward all reforms at once. We are sorry for this, but as it is so we must accept the fact and wait. We believe, however, with The Nation, that indigestion is quite as great a vice as intemperance, and needs quite as much the attention of social reformers.

DISEASES INDUCED BY FOOD. — Happiness and morality are greatly increased by a sufficient and proper diet, unhappiness and sickness, and even crime, result from an improper one. Diseases are produced by,

1. Excess or deficiency of food.
2. Imperfect condition of digestion.
3. By poor quality of food.

When too much food is taken, it may not all be digested and absorbed, but a portion of it decays in the alimentary canal, producing flatulence, dyspepsia, diarrhea, constipation, and irritation. Sometimes the putrid mass is partly absorbed, producing blood, poisoning, fevers, torpidity, heaviness and fetid breath, jaundice, sore eyes, skin diseases, and other complaints. If an excess of food is digested and absorbed, then comes obstructions to the smaller vessels, and a long train of diseases, as plethora, apoplexy, fevers, rheumatism, gout, and a long list of maladies we need not mention.

Those who eat very largely of meat, may find the muscular fiber undigested in the feces, by examination with a microscope. Fatty and starchy matter passes undigested when taken in excess. When albuminous food is taken in excess, it is almost sure to obstruct the liver and kidneys, and produce plethora.

Deficiency of food does not often occur in this land of plenty, but the results of deficiency are muscular and mental weakness, feverishness, dyspepsia, bloodlessness and loss of weight. Etc.

ing too frequently produces bad effects, so does too long intervals between meals.

A bad quality of food, or good food badly prepared, is a parent source of many diseases which we will not name here.

HOW TO MAKE GOOD GRAHAM FLOUR.—

As Graham flour is usually furnished, the bran is coarse and offensive to many, especially to children. I confess I feel obliged to sift such Graham flour before using it—through a coarse sieve, to be sure—but if the flour had been properly ground, I should not remove any part of it. There are few millers who grind it properly. The stones should be so sharp as to cut the grain evenly and finely, so that no coarse bran is made. This is sometimes called "wheat meal," and is sweeter, and more satisfactory in every way than the ordinary Graham flour that we buy—which is simply a mixture of fine flour, canaille, and bran, or those parts left unseparated after grinding.

Miss Beecher, in her recipe for gems, directs the use of a "spoonful of molasses and a pinch of salt" to a quart of the flour. I can not think that this would be any real improvement upon the old rule that has found so many hearty friends—simply, flour and water, well beaten together into a batter a little thicker than for griddle cakes, dipped into gem-pans, and baked quickly in a hot oven.

These gems, made of good wheat properly ground, are fit to set before any king; more than that, they are such food as American citizens deserve and should have, to make them strong, and wise, and good; fit rulers of a self-ruling nation. Let patriotic women who would fain do the State some service, take into consideration, among other things, the subject of healthful cookery. They are doing this, and will do so more and more.—*Faith Rochester, in Agriculturist.*

People in cities who wish for good Graham flour, should order it from the mill, and have it made of the best white wheat and finely ground. That sold under the name of Graham in cities,

is usually worthless and unfit for food, being made of the worst wheat.

NUTRITION, OR RATHER STRENGTH STORED

UP IN FOOD.—As a general rule, all the energy of food can not be extracted from it by the system. If it could, then an ounce of lean beef would give strength sufficient to lift fifty-five tons one foot high; an ounce of veal, forty-five tons one foot high; an ounce of bread, eighty-three tons; an ounce of rice, one hundred and forty-five tons; an ounce of oatmeal, one hundred and fifty-two tons; an ounce of pea-meal, one hundred and forty-six tons; an ounce of potatoes, thirty-eight tons; an ounce of carrots, twenty tons; an ounce of cabbage, sixteen tons; an ounce of butter, two hundred and eighty tons; an ounce of the white of an egg, twenty-two tons; an ounce of the yolk of an egg, one hundred and twenty-seven tons; an ounce of good cheese, one hundred and sixty-eight tons; an ounce of milk, twenty-four tons; and an ounce of sugar, one hundred and thirty tons, one foot high. In order, however, to get all this strength out of food it must be well digested, and used to advantage. There must be no waste. It is calculated that the strength developed from food in the average body is equal daily to an amount that will lift five thousand tons one foot high. But by far the larger part of this is used up in keeping the body warm, circulating the blood, digesting food, etc., so that the available force of the body is only a small portion of this.

MARRYING FOR MONEY.—The Ladies

give as a reason for marrying for money, that they now seldom find any thing else in a man worth having. If a woman can find nothing in a man worth marrying except his money, then she had better not marry, for ten chances to one she will find it more difficult to get his money than to earn it herself. It is not wise to look for perfection in men and women seeking matrimonial alliances, but it is worth while to find something to love, respect, and honor. Without these marriage is a farce.

HOW MUCH TEA AND COFFEE IS USED.

—During the year ending June 30, 1870, 385,256,574 pounds of coffee were imported into the United States, valued at \$24,234,879. Nearly all this coffee must have been used here, since the amount reexported was 4,083,000 pounds. For the twelve months ending December 31, 1869, the amount of coffee imported into Great Britain and Ireland amounted to 173,416,322 pounds, of which only 29,108,932 pounds, valued at \$4,006,895 were entered for consumption, the rest being intended for reexportation. The amount of tea imported into the United States during the year ending June 30, 1870, is stated to be 42,540,471, valued at \$12,489,217, while Great Britain received during the year ending December 31, 1869, 111,887,458 pounds of tea, valued at \$40,125,623. Taking the amount of tea and coffee consumed during these years as a basis of comparison, we find that the American people drink coffee chiefly, and those of Great Britain tea. There is nine times as much coffee consumed in the United States as in Great Britain, and only one-third the amount of tea. In the United States the duty on coffee is three cents a pound, while in Great Britain it is three pence, or about six cents.

In round numbers Americans consume about one dollar's worth of tea and coffee to each person, or \$36,000,000 worth in a year. This money would buy 6,000,000 barrels of flour, in which is stored up much more force than in the tea and coffee. Of course tea and coffee are harmless stimulants compared with alcohol, but they are not altogether harmless, and cause a vast amount of ill health which might be avoided.

HEW NOT TO BECOME A HERO.—Mr. Abbott does not recommend men and women to worship heroes. He says that "no hero worshiper becomes a hero. The large soul relies on humanity itself, not on single men; and while all noble examples in spirit and vitalize, no one must acquire exclusive sway. It is impossible that a follower should be original in life; yet originality of life is the proof and text

of a great moral development. Such is the instinctive judgment of mankind, as shown in the bestowal of historic honors. Even great crimes are pardoned to the powerful and independent minds that have disdained to follow. Commonplace men are content to follow; but even they follow no followers."

Mr. Abbott is about right; and if parents would have their children something beside common-place people, they must early instill into their minds the spirit of freedom and integrity. The first will make them brave, and without bravery a human being is not worth much; the second will make them solid, and without solidity, even freedom itself is little better than slavery. Parents are too apt to train their children to think and act and believe as they do. There is no surer method of quenching any spark of true manliness and womanliness than this.

WHEN IS A MAN EDUCATED?—Here is where the Augean stable of a past education needs to be purified. The notion that when a child has learned to read, write, and cipher, he is educated, must be eradicated. These are at best but means, and are only the instruments by which education is conducted. It will be for the man of science to show that perhaps the better half of a liberal education may be obtained without books at all. This is the error that lies at the foundation of all of our systems of education, whether conducted in our highest, middle-class, or national schools. The education of the senses, by which the man is to get his living and to perform his duties in life is entirely neglected.

If a youth is not trained in early life to such pursuits and habits as will enable him to gain good living, he can not be said to be educated as he should be. In a large city like New York, the number of persons who hang around and on to others who do know enough to take care of themselves, is perfectly frightful. The successful man who does not have a chance to support half a dozen or more is very fortunate indeed.

INTERESTING CASES OF HEREDITARY LONGEVITY.—Freegift Wells, a worthy member of the Shaker Community, deceased on Saturday, the 16th of April, 1871, aged 85 years, 10 months, and 25 days. He was the youngest of a family of eleven children, all now dead, save one, whose present age is over 93 years.

The remarkable longevity of this family is worthy of notice. Thomas and Abigail Wells, the parents of said family of children, were each, respectively, 80 and 85 years of age at death. The names and ages of the ten children, who lived to mature years, were as follows, viz. :

	Years.	Mos.	Days.
Seth Y. Wells, deceased, aged 80	2	11	
Thomas Wells, Jr., dec'd, aged 74	9	15	
Benjamin Wells, deces'd, aged 81	2	19	
Calvin Wells, deceased, aged 81	1	8	
Luther Wells, deceased, aged 86	5	4	
Stephen Wells, decesas'd, aged 88	10	5	
Hannah Wells, decesas'd, aged 86	1	11	
Jesse Wells, now living, aged 93 and over.			
Abigail Wells, Jr., dec'd, aged 49	2	3	
Freegift Wells, deceased, aged 85	10	25	

Thus we see that longevity is hereditary. This case is a very remarkable one. Being Shakers their habits were simple, and their expenditure of life-force not rapid.

HOSPITALS, HYGIENE, AND WOMEN.—We presume few of our readers have forgotten a book published a few years ago, entitled "Notes on Hospitals," by Florence Nightingale. It was just after the Crimean War. Dr. Parkes, in his great work on Hygiene, in speaking of this little book, observes that it is impossible to over-rate the good done by this work. It proved a seed planted in good ground at the right time. It brought forth a crop of good books on the construction of military hospitals, and a great improvement in their management; a powerful argument, we think, in favor of women physicians. If Miss Nightingale could do so much, what could not a host of well-educated women physicians accomplish?

SIXTY YEARS OF SUFFERING.—Recently, a man over eighty years old presented himself at a hospital clinic in Philadelphia. He had suffered with neuralgia for sixty years, and for its relief had swallowed almost "drug stores of medicine." His case was critically examined, and every conceivable cause fully explored. The result was, that two conditions were found. One of these was a long, chronic periodontitis of an old fang, while the other was the abrasion or wearing down of the teeth, thus encroaching upon the pulp cavity; two of the nine favoring conditions which were enumerated at that time. The fangs and the abraded teeth were simply extracted, and with what result? After all these years of torture, the man returned to the clinic in about a week to report himself greatly improved. In another week the change was even more favorable; and in another, he expressed himself free from pain, and was then discharged with the injunction to return upon the slightest reappearance of the difficulty. For three months, however, he has not made his appearance, although always before regular.

HOARDING UP WEALTH.—Some one says, "It is as absurd to spend one's life in hoarding up millions of wealth which one can never enjoy as it would be to collect and lay up in a store-house sixty thousand mahogany chairs, which were never intended to be used for the furniture of apartments, or eighty thousand pairs of trowsers which were never intended to be worn."

There is much wisdom in the above statement, when viewed from the standpoint that those who amass wealth do it only for the purpose of having, without reference to using; but to amass wealth honestly, for the best uses of wealth, is no mean or trivial labor. Wealth, rightly used, is power, and power gives ability to do what needs to be done. If no one amassed wealth, who would pay for railroads, or great universities, or ship canals. Those who decry against wealth, honestly gained and rightly used, do not know of what they talk.

How to Treat the Sick.

TYPHUS FEVER.—*Editor Herald of Health:* On page 230 of your valuable journal, I see that cold water is recommended for typhus fever. I find, however, in experience and practice in my own family, that hot water is far preferable, and has a much quicker and better effect. I reason thus: There is one main condition in all diseases,—want of vitality. This comes from want of sufficient animal heat. Ague (or cold) and fevers come from the same causes. The one, from a cooling of the blood from improper circulation; the other, from a congestion of the flesh (including muscles) inducing, from irritating the nerves, fever. Now it seems to me that when the system is already reduced and cold, that it is wrong treatment to plunge in cold water and let the water absorb still more heat. The reaction, however, I admit generally breaks the disease, but at the expense of strength and animal power. Hot water (as hot as it can be used) has a different action. It gives a moist heat to the body, the congested parts (whether flesh, blood, or muscle) become warm and softened, and in the case of chill, broken, and fever, by causing a free and profuse perspiration, stops the fever. This is my experience. It is well, however, to take a tepid bath afterward, and, in order to adapt the body to the atmosphere finally, as cold as it comfortably can be taken, without chilling.

The sooner that the people come to understand that there is but two conditions of disease, congestion (which includes paralysis) and irritation, which includes any thing which may disarrange the nervous action, the sooner a true basis will be arrived at on which to found a true system of combatting disease. It seems to be of no use to tell people that every stimulant (whether alcoholic, nicotinic, condimental, or from undue excitement) is destructive of vitality; and that low vitality is disease; and the only thing one can do is to give the best advice as to how to remedy the evil as far as possible. You

are doing a good work in the cause of reform, and I trust you will have your reward.—*W. G. P. Brinckloe, Editor National Farmer.*

TREATMENT OF CONSTIPATION.—I know of no treatment better calculated to remove constipation of the bowels—the result of a depraved condition of the system, than nutritious and easily-digested food in compact form, not sloppy nor bulky; bread made from unbolted flour being one of the principal articles of diet. I speak from an experience of over thirty years in the use of this bread, having used it myself for that length of time, and prescribed it constantly to all my patients who are troubled with torpid bowels. Out of several cases of its curative power, which I might mention, I will state that I was called to visit an old lady of seventy years of age, about four years ago; she had moved here from Ohio, and had an attack of intermittent fever, which she had contracted many years before. She was extremely feeble, with great nervous prostration; her greatest trouble was constipated bowels. She kept pills always in the house, and two or three times a week took a dose, otherwise she would have no evacuation from her bowels. I prescribed for her intermittent fever, and recommended her, if able to leave her bed again, to use Graham bread for a time, as her almost exclusive diet. I instructed her how to use and make it. I paid her but one visit and heard no more of her. Two years afterward, a hale old lady walked into my office and announced herself as the person I had visited with intermittent fever. She stated she had used the bread, made it the principal part of her food, and had not taken one pill since she commenced its use. Within four blocks of this hall resides another of my female patients, who is a stout, healthy-looking woman, of middle age, but who had to keep her box of patent pills constantly in use. I persuaded her to try Graham bread, and although three years have

elapsed since she commenced its use as an article of food, she has had no further need of cathartic pills. Another old lady, over sixty years of age, whom I was called to see within the last twelve months, with obstruction of the bowels, large masses of hardened feces being accumulated in the colon. She was in the habit of taking large quantities of epsom salts, two and three ounces at a time, to procure a passage. She had, previous to my seeing her, taken fifteen pills, epsom salts, and castor oil—but no results. I tried a variety of remedies for three or four days, but no passage. I at length succeeded, by passing a rectum tube above the sigmoid flexure of the colon, inserting into it the nozzle of a self-injecting syringe, and pumping in several pints of tepid water, and subsequently in the same way pumping in over one pint of olive oil. When she recovered and was able to eat food, she used, as her principal article of diet, Graham bread, and to-day she enjoys better health than she has had for many years.—*Dr. Johnson.*

PREVENTION OF SMALL-POX.—The small-pox is raging in London, with greater destruction of life than has been suffered by any similar visitation within the current century. Dr. Lankester, in discussing the possibility of holding it in check by proper sanitary measures, and condemning severely the inefficiency of official functionaries, insists that the progress of the pestilence should be arrested by the isolation of each case and by proper methods of disinfection. All possible means by which the poison can be conveyed from one person to another should be prevented. The poison of small-pox retains its vivaciousness or reproductive power more tenaciously, apparently, than any other animal poison. It can be conveyed in clothes, paper, thread, string, every thing it is possible to use in a sick room. The doctor may take it to his patients, the lawyer to his clients, or the clergyman to his congregation, if he has been visiting the sick. The Levitical laws against leprosy would hardly be too severe to prevent the spread of small-pox. Rules of the most strin-

gent kind ought to be laid down for the guidance of nurses and all persons entering the sick room. Above all, in every district where small-pox prevails, there should be a disinfecting apparatus. This should be an oven, not heated by gas, but by a stove. The oven should be long enough to receive beds and all kinds of bed-clothes, and wearing apparel. These things should be conveyed to the stove in a covered van, which could at once be placed in the oven, without opening it to remove its contents. Filthy rags and beds of straw and shavings should be burned in the stove. Such an apparatus is at present at work in the parish of St. Giles. It should forthwith be erected in every district in London. Even when the small-pox has killed its utmost, such ovens will be useful for a future war with the demon of contagion in some other form.

There has been no time since the discovery of vaccination, when it has been more thoroughly done than now in London. It is to be hoped that people will not longer depend on this alone as a preventive, but upon all wise sanitary measures.

NOTES FOR THE SICK ROOM.—Two sick persons should never occupy the same room at the same time. They poison each other, not only in body, but in mind. One reason why hospitals become such pest-houses, is because of the large number of sick persons brought into near proximity. The greatest possible care should always be given to keep the air of a sick room pure, by frequent changes, and, if needful, by disinfectants. Every person ought to understand the way to use disinfectants, so as to have them produce the best results with the least harm. It is often well to have two rooms for a person who is very sick, and to change from one room to another, occasionally. This gives an opportunity to keep the air and bedding pure and sweet. The very walls, floors, carpets, bedding, and furniture of a sick room absorb and retain the effluvia from those who are very sick, and thus contaminate the room permanently, unless great precaution is taken to prevent it.

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

How to Keep Cool.—The majority of people experience a great deal of discomfort every summer from the heat, which they might in a great degree, if not wholly, avoid. A careful attention paid to the following rules will amply repay any one, not only in additional personal comfort, but in increased health and strength :

1. The diet should consist of fruits, vegetables, bread and other preparations of whole wheat-meal, oatmeal, or southern corn-meal. Northern corn contains more oil, starch, and sugar than any other grain, while Southern corn contains less than any other, consequently Southern is one of the best grains for summer use, and Northern corn decidedly the worst. Avoid all heating and stimulating articles of food, as meats, especially fat and salted meats, butter, sugar, gravies, and starchy and oily food of all kinds. Also, avoid pepper, salt, spices, and condiments. They all cause more or less irritation and feverishness of the system. Other things being equal, the less meat and more fruit eaten during hot weather, the less will be the discomfort experienced from the heat. Do not eat hot food, nor drink hot drinks. A less quantity of food is required in summer than in winter, and care should be taken not to overload the stomach with more than the system requires. An excess in quantity of even the best kinds of food will clog up the system, and produce the very result you are striving to avoid.

2. Drink nothing but water, or the unfermented juices of fruits. Avoid drinking large quantities at a time. Of course, this precludes the use of tea, coffee, beer, wines, liquors, etc.

3. A moderate amount of exercise is essential to good digestion, and the healthful action of the skin, kidneys, and bowels, without which comfort and health can not be obtained.

4. The clothing should be light, light col-

ored, loose fitting, porous, and changed often.

5. The entire body should be bathed every day, either in the morning or at night. Tepid, cool, or cold water may be used, according to the strength of the bather. Farmers, machinists, and others who perspire freely, and are exposed to dust, should bathe at night. They will rest and sleep better for doing so. If immersion of the body is not practicable, a basin of water and a towel will suggest the mode of procedure. The whole body can be cooled in a short time by holding pieces of ice in the hands, or by letting a stream of cold water fall upon the wrists or ankles. The cold sitz or hip-bath is also an excellent and quick method of reducing the temperature of the body to the degree of comfort. Another mode of accomplishing the same result is to immerse the soles of the feet in cold water.

6. Avoid all undue mental or physical excitement.

Sunstroke — Cause, Prevention,

and Cure.—The usual exciting cause of sunstroke is exposure to the direct rays of the sun, generally in connection with great exhaustion of the bodily powers. It sometimes occurs without the direct agency of the sun. The principal predisposing cause is the use of alcoholic stimulants. Enfeebled, poorly fed, over-worked, and irritable persons are also somewhat liable to it. I never yet have known of a single instance of sunstroke occurring to a person who neither used alcoholic stimulants or tobacco, and who was regular and temperate in his habits. As special precautions during hot weather, the entire body, including the head, should be bathed daily in cool or cold water, great care should be taken not to wear any thing around the neck so as to impede the circulation in the least, and the covering of the head should be light and porous, so that the air can circulate freely through it. Those who obey the laws of health need have no fear of sunstroke.

The treatment of sunstroke should vary somewhat according to the condition of the patient. In all cases he should be removed to a cool and shady place, and the clothing stripped from his body. If the head is hot, cold water or ice should be kept constantly applied to the head and neck, and hot water to the hands and feet. If the skin is cool and moist, the entire surface of the body should be vigorously and continuously rubbed until reaction takes place. If the skin is hot and dry, then the whole body should be rubbed with cloths wet in the coldest water that can be obtained, or with pieces of ice, until recovery takes place, as it almost invariably will under this treatment. Bleeding in such cases, as practiced by many, is almost certain death.

Headache.—"I am nineteen years old, just left college; am already an assistant editor on a city weekly, and a writer for various papers. Since I've been thirteen years old I have suffered with constant headaches, which occur regularly every one or two weeks. The headaches are on the temples and forehead, and the pain often suffuses the eyes with a burning sensation. The headache incapacitates me for work. I go to sleep, and wake in the morning refreshed. Latterly these headaches have become not quite so frequent, but more severe, and I am often interrupted in my sleep by ringing noises in my head, though generally my sleep is sound. My diet is simple. I eat three meals regularly every day. My breakfast is plain, a glass of milk, an egg, bread, and fish; dinner, a plain steak; supper, weak tea and toast. I eat fresh vegetables in their season. Don't touch pies, cakes, or very much butter. I rise at 6, regularly, and retire at 10. Use dumb bells in the morning, and flesh towels at night. Don't smoke, or chew, or drink liquors of any kind. If you could tell me what is the matter and what will cure the constant headache—which I can only ascribe to the study of the past six years, for I have been constantly at work at school and college—you will oblige me. The only medicine I have taken has been a little tonic—iron, calisaya bark; also citrate of magnesia, to cure constipation at times."

The causes of your headaches are imper-

fect digestion, constipation of the bowels, too much mental effort, and too little physical exercise. You must study less and exercise more. Take a great deal of out-door exercise. Walk all you can—five to ten miles a day will not be too much, after you get accustomed to it. Eat but twice a day, and take plenty of time at your meals. Quit using tea, milk, eggs, butter, sugar, fine flour bread, and meat of all kinds. Eat Graham bread, oatmeal, cracked wheat, and fruits and vegetables. If you can't get such food elsewhere, take your meals at the Hygienic Institute. The Movement Cure treatment, in connection with diet, would cure you in a short time.

Freckles, Discolorations, etc.—

"Will you be kind enough to tell me if any condition of the system produces freckles, brown discolorations, and dryness of skin, and what will remove them—whether any external application will affect them, and if they indicate an impure state of the blood?"

These conditions are usually the result of an impure state of the blood, or a torpid condition of the liver and skin. The indications for treatment are to purify the blood, and promote the healthful action of the excretory organs. The Turkish bath is the most effectual remedy for nearly all affections of the skin. The best substitute for that is the wet sheet-pack. A plain, wholesome diet, plenty of out-door exercise, and general attention to health conditions are very important aids, and must not be neglected.

Climate for Nervous Diseases.—

"Will you please inform me in your Answers to Correspondents as to the best climate for persons troubled with nervous diseases?"

A dry, cool, and hilly or mountainous region is desirable in such cases, but climate is not nearly so important as plain, nourishing food, out-door exercise (when able, when not the Movement Cure) sunshine, pure air, mental quiet, and general attention to the laws of health.

"**Alcohol** is nowhere to be found in any product of nature—was never itself created by God, but is essentially an artificial thing, prepared by man through the destructive process of fermentation."—*Prof. H. Munroe, M. D.*

NOTICES OF NEW PUBLICATIONS.

THE DESCENT OF MAN. By CHARLES DARWIN.
Illustrated. In two volumes. New York: D. Appleton & Co, 1871.

Whatever the reader may think of Darwin's theories regarding the origin of the human family, he can not help but read his works with pleasure and profit. They are storehouses of knowledge regarding animals of all kinds, such as can nowhere else, in so small compass, be found. And then the spirit of the book is so beautiful. We have never had any thing like it before, and the lesson of such a writer in such a temper can not fail to produce a profound impression upon the minds of those whose business it is to discuss the great questions of the age, as well as upon the minds of the common reader.

An idea of the book may be had from the headings of a few chapters.

Chapter I discusses the Evidence of the Descent of Man from some lower form.

Chapter II makes a Comparison of the Mental Powers of Man and Animals.

Chapter IV gives Mr. Darwin's ideas as to the manner of Development of Man from some lower form.

Chapter V goes over the question as to How the Mental and Moral faculties were Developed during Primeval and Civilised Ages.

Something over half of the work is devoted to an exposition of the doctrine of sexual selection, by which is meant the success of certain individuals over others of the same sex in relation to the propagation of the species. A couple of paragraphs showing how the human race may still make great progress by what he calls sexual selection, will be peculiarly interesting to the readers of this journal, as the same views have more than once found expression in these pages.

Mr. Darwin on this subject observes, "Man scans with scrupulous care the character and pedigree of his horses, cattle, and dogs before he matches them; but when it comes to his own marriage he rarely or never takes such care. He is impelled by nearly the same motives as are the lower animals when left to their own free choice, though he is in so far superior to them that he highly values mental charms and virtues. On the other hand, he is strongly attracted by mere wealth or rank. Yet he might by selection do something not only for the bodily constitution and frame of his offspring, but for their intellectual and moral qualities. Both sexes ought to refrain from marriage if in any marked degree inferior in body or mind; but such hopes are Utopian, and will never be even partially realized until the laws of inheritance are thoroughly known. All do good service who aid toward this end. When the principles of breeding and of inheritance are better understood, we shall not hear ignorant members of our Legislature rejecting with scorn a plan for ascertaining by an easy method whether or not consanguineous marriages are injurious to man.

The advancement of the welfare of mankind is a most intricate problem: all ought to refrain from marriage who can not avoid abject poverty for their children; for poverty is not only a great evil, but tends to its own increase by leading to recklessness in marriage. On the other hand, as Mr. Galton has remarked, if the prudent avoid marriage, while the reckless marry, the inferior

members will tend to supplant the better members of society. Man, like every other animal, has no doubt advanced to his present high condition through a struggle for existence consequent on his rapid multiplication; and if he is to advance still higher he must remain subject to a severe struggle. Otherwise he would soon sink into indolence, and the more highly-gifted men would not be more successful in the battle of life than the less-gifted. Hence our natural rate of increase, though leading to many and obvious evils, must not be greatly diminished by any means. There should be open competition for all men; and the most able should not be prevented by law or customs from succeeding best and rearing the largest number of offspring. Important as the struggle for existence has been and even still is, yet as far as the highest part of man's nature is concerned there are other agencies more important. For the moral qualities are advanced, either directly or indirectly, much more through the effects of habit, the reasoning power, instruction, religion, etc., than through natural selection; though to the latter agency the social instincts which afforded the basis for the development of the moral sense may be safely attributed.

To those who are fond of scientific reading on the subjects here treated of, these books will have a peculiar charm. Price \$2.00 per volume.

ON THE GENESIS OF SPECIES. By ST. GEORGE MIVART, F. R. S. New York: D. Appleton & Co, 1871.

Those who have read Darwin's great work on the Descent of Man will need also to read this reply to it by Mivart; it being, as yet, the only answer that is considered worthy of the designation. While not so readable nor so full of knowledge as Darwin's book, it certainly makes some serious and pertinent objections to his theories from a purely scientific standpoint, and they have already attracted much attention. The spirit of the book is candid, reasonable, and not dogmatic. It is refreshing to see our men of science discuss the great questions of the age with so much amiability and so little bitterness. By so doing, they are working a good work for the cause of morality and religion.

THE STORY OF MY LIFE. By HANS CHRISTIAN ANDERSEN. New York: Hurd & Houghton.

The beautiful stories and poems which this famous writer has given us from time to time, have made us so well know him and love him that we catch eagerly at the story of his life told by himself, and we know before we read that we have a treat before us. The autobiography was first written in 1846, translated by Miss Howitt, and published in England. In 1855 it was rewritten by Andersen and expounded, and now on its being translated again into our language, the author extends the work up to the date of 1867, and terminates it with an account of the great festival at Odense, which he looks upon as the crowning honor of his life. The book is brought out at a uniform rotation with all of his writings published in this country, and is prefaced by a fine portrait of the author.

PARALYSIS, AND OTHER AFFLICTIONS OF THE NERVES; THEIR CURE BY VIBRATORY AND SPECIAL MOVEMENTS. By GEORGE H. TAYLOR, M.D. New York: S. R. Wells. Price \$1.00.

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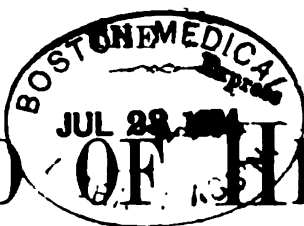
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CONTENTS FOR AUGUST, 1871.

GENERAL ARTICLES :		Page	Recipes for Wholesome Cooking—Vegetables, and Puddings.....	80
Physicians and the Temperance Reform— <i>John Higginbottom, Esq., F.R.S.</i>	49			
A Visit with Father Cleveland— <i>Wallace Norris</i>	55			
Flying to Shelter (A Poem)— <i>Elizabeth Oakes Smith</i>	57			
When Should Children be Taught to Read?— <i>Sham Kindergarten Culture</i> — <i>Elizabeth P. Peabody</i>	58			
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Bridgall</i>	61			
Just a Thought (A Poem)— <i>Francis Dana Gage</i>	65			
Home Life— <i>Rev. Charles H. Brigham</i>	66			
Secret of a Wholesome Life— <i>Miss M. M. Wiswell</i>	69			
My Medical Advisers— <i>Izida M. Millard</i>	72			
Information as to Human Longevity— <i>E. Roy Lankster, D. A.</i>	73			
Studies in Hygiene.....	75			
EDITORIAL DEPARTMENT :				
William Howitt's Habits of Life.....	81			
How a Man Feels when He is Hit by Lightning.....	85			
The Suicidal Proclivities of the French—Morals and Tobacco—Education.....	86			
To Prevent Pitting in Small-Pox—Compression of Feet—Hygiene for Thinkers and Workers—Borrowing Joy.....	87			
ANSWERS TO CORRESPONDENTS :				
Meat in Summer—Varicose Veins—Adam's Apple—Baking Powder—Diet for Constipation—Good Precedent.....	88			
Fetid Perspiration of the Feet—Antipathy to Strawberries—Honey—Soap for the Hair—Ice-Cream—Hard Water.....	89			

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VOL. 18, No. 2.]

NEW YORK, AUGUST, 1871.

[NEW SERIES.

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A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

COMPRISED IN A SERIES OF TWELVE ESSAYS CONTRIBUTED BY OUR BEST THINKERS AND WRITERS.

NO. X.—PHYSICIANS AND THE TEMPERANCE REFORM.

BY JOHN HIGGINBOTTOM, ESQ., F. R. S.

[EDITORIAL NOTE.—When our list of articles on Temperance was published last October, we promised to give one paper on "Physicians and the Temperance Reform." In looking about for an able writer for this article, it occurred to us that as John Higginbottom, F. R. S., of Nottingham, England, now eighty-four years old, was the father of the method of treating the sick without alcoholic stimulants, he should be invited to furnish it, and we solicited him to do so. In answer, he has sent us the following, which will be found of peculiar interest to our American readers, as his practice has often been cited here as proof of the preference of the Non-alcoholic over the Alcoholic method of treating the sick. We commend it to all as a thoughtful and valuable contribution to medical literature, and we invite medical men who have had experience with the Non-alcoholic plan to verify Mr. Higginbottom's experience.]

AT the commencement of the Temperance movement a most serious error was committed in adding to the pledge the proviso, "except for medicinal purposes." It has given permission to medical men to prescribe alcohol; to the publican, the wine and spirit merchant, to sell it, and the public at large to drink it; nay, every one thinks himself competent to order it as a medicine; and all the old ladies would be exceedingly angry if any one disputed their right or ability to prescribe it to their juniors.

If a medical man has practiced his profession for some years, and becomes a teetotaler, he soon suffers persecution, and loses his reputation; his friends and his practice leave him—in short, he receives the common wages of a reformer; he is under the necessity of recanting to regain his former status in society, or to quit his profession and seek some other employment for a livelihood.

Some of my medical brethren, several of eminence, have acted with more policy, and thereby have preserved their reputation and practice; they have not become ultra teetotalers, but

they have prescribed or allowed a *little drop of alcohol*, prescribed it in fever, or as they say in extreme cases; they have publicly acknowledged they are not teetotalers—that is enough, they have escaped scathless. In some consultations, when the patient has been suffering from disease of the heart, and in other cases, in which alcoholic stimulants were totally inadmissible, I have waited to hear the physician's direction, which is seldom completed until some permission was gained for the patient to take a *little wine or brandy*, evidently as a *placebo*—the meaning of which is, "I will please." A daughter has asked in a beseeching manner, "Shall my mother take a little brandy?" The answer has been, "Just a drop to flavor the gruel." The drop is often between a drop and a table-spoonful or more. I once remonstrated with a physician, who answered, "Let them take what they like." One celebrated physician told me that he never prescribed more to a patient than two or three tea-spoonfuls of brandy, and only that quantity in one or two particular cases. I really wonder what those particular cases were. I have not made the discovery, and I am of opinion that no medical man can make that discovery. Such admissions are sufficient—the doctor is a fine clever fellow, and not a scrupulous teetotaler. Some of my friends, in order to save me from persecution they knew I should suffer, and from evident pecuniary loss, wished me to admit that I would prescribe a little alcohol—a little sometimes; but not having such a word as "moderation" in my Temperance vocabulary, they importuned me in vain.

The prescribing of alcohol in various forms, such as brandy, whisky, wine, porter, bitter ale, etc., has been most perseveringly carried out, particularly since the total abstinence movement commenced; indeed, so much so, as to render the Temperance cause almost a nullity in some localities. Before its origin persons might be abstainers from alcoholic fluids during a long life, and would not be troubled with kind friends to beseech them to take a little brandy, wine, or ale, for health's sake; although at that time the universal opinion was that brandy was the real *Aqua Vita*—the "water of life;" and that the "home-brewed ale was the strength of corn, and liquid bread;" that bread was the staff of life, but that a sup of good ale was life itself—all profit and no loss.

"He that buys land buys many stones,
He that buys flesh buys many bones,
He that buys eggs buys many shells,
But he that buys good ale buys nothing else."

"Nottingham ale, boys, Nottingham ale.
No liquor on earth like Nottingham ale."

Nearly every body had faith in the virtues of home-brewed ale, until our good friend, Mr. Joseph Livesey, of Preston, showed to us experimentally the "Great Delusion."

Teetotalers have the same enemies to fight against as Christianity—the World, the Flesh, and the Devil. I soon found a snare was laid for me to break the pledge. At the commencement of the Society, on visiting one of my old respectable patients, the lady of the house informed me a friend had called upon her purposely on my account; saying it was quite visible that I was declining in health daily, and most sincerely begged of the lady to beseech me to take a little wine or ale. The lady asked her how long it was since it had been observed that I was declining in health. "Ah," said she, "ever since the Teetotal Society commenced." "Oh, dear!" said my patient; "it is a wonder it did not fail earlier, as Mr. Higginbottom has been a teetotaler for twenty years." On hearing this her friend elunk away, heartily ashamed of herself—she was disappointed in her crafty scheme, her object was to alarm me, that I might break my pledge; she cared not a straw about my health.

In the year 1836 I had a very severe attack of influenza, and inflammation of the lungs, and was confined to my room for six weeks. The disease was so severe as to leave a portion of the left lobe of my lung in a condensed and almost hepatized state, unfit for respiration; the cough and debility continued for some time, but under God, by teetotalism, and natural stimulants—pure air, pure water, exercise, and simple nutritious diet—I quite recovered my health and the perfect use of my lungs; this I think would not have been the case had I taken alcoholic fluids, with the false expectation of deriving strength: chronic disease of the lungs and death would have probably followed. It was reported during my illness that the physicians poured brandy down my throat to keep me alive. My late partner, Mr. Booth Eddison, attended me; I had no physician, and I had not one drop of brandy poured down my throat. When it was understood that I had no brandy given me, then it was reported that I took wine in my carriage, and drank it on the sly. When I denied that also, it was said I was so conscientious that I would not allow a drop to get into my stomach, and I was obliged to have brandy rubbed into my skin, and that it got into my body by absorption, to strengthen me; this foolish report was

also denied, and the great wonder now was how I ever got my strength. It appeared incredible that I became strong and healthy by taking milk, eggs, bread, rice, mutton, etc., and with pure air and exercise, and nothing to drink but water, weak tea, or coffee. It is not understood by the people how natural food taken into the stomach nourishes the body, increases the strength, and prolongs life; and that the artificial stimulant of alcoholic fluids preys upon the vital organs, diminishes strength, and shortens life.

The practical difference between stimulus and strength, I heard from a reformed character of the name of Parsley, at a Temperance meeting. He said, "When I was a drunkard, I wanted drink, to keep steam up, every two or three hours; but when I became a teetotaler, I eat a piece of beef and bread, and drank some coffee, and it kept steam up for five or six hours"—proving that the natural stimulants of food, etc., are far better than the unnatural stimulants of alcoholic drinks. The erroneous opinions of the good medicinal properties of wine and brandy appear indelibly fixed in the minds of both the public and of medical men. It was declared to me, and believed by some females, that port wine was changed into pure blood immediately when taken into the stomach, and supplied any deficiency of that vital fluid. To prove the contrary, I showed them the component parts of a glass of port wine. I submitted it to the still, and drew off a table-spoonful of alcohol and burnt it; afterward, two table-spoonfuls of water, leaving about a penknife pointful of red coloring matter—the residuum, not containing any nutritious matter.

Brandy was long considered a tonic by the profession. Sir Astley Cooper himself declared his ignorance to a Temperance physician whom I knew—saying, "We used to call brandy a tonic; we have all been deceived, it is only a stimulant." One of our oldest and most respectable medical men said to me that brandy was the finest tonic. I told him it had no tonic quality whatever, it was a diffusible stimulant; this he could not deny. The ignorance of medical men some time ago was marvelous, considering that alcohol entered into so many of the medicinal preparations, and was also daily prescribed in the popular forms, blindly following the custom of their forefathers, without any consideration.

About forty years ago we entirely banished alcohol in every form from my own house. At that time, my wife, following the rule of society, not knowing then that "the custom is more

honored in the breach than in the observance," offered a lady a glass of wine, who said to her, "Don't you take wine, Mrs. Higginbottom?" She answered, "No," assigning as a reason, "that she considered it injurious." "Then," said the lady, "why do you offer it to me?" This reproof had the desired effect of banishing all alcoholic fluids from our house for ever. We would now as soon admit known thieves and murderers. The Spanish proverb is, "Give wine to your enemies"—a ready way to weaken, subdue, and conquer them a cruel hospitality. "Woe unto him who giveth his neighbor drink—that putteth the bottle to him."

It is now generally admitted that alcohol is not food, and from daily observation and practice, for more than half a century, I do not consider it a medicine in the true sense of the word. What is a medicine? It is a term derived from *medeor*—to cure. During my long and extensive practice, I have not known or seen a single disease cured by alcohol; on the contrary, it is the most fertile producer of disease, and may be truly considered the bane of medicine, and the seed of disease. It is entirely destitute of any medicinal principle. Alcohol is the invention of man in the forms we use it, by the destruction of the food and fruit God has given us—a poet says, by the agency of the Devil.

"He joys to transform by his magical spell
The sweet fruits of earth to an essence of hell;
Corrupted our food, fermented our grain,
To famish the stomach, and madden the brain."

Shakespeare says, "O thou invisible spirit of wine! if thou hast no other name to be known by, let me call thee Devil!" The subject of Alcohol as a Medicine has occupied my attention ever since the year 1810. At that time I was of opinion that alcohol in various forms could not possibly be dispensed with in medical practice, but was absolutely necessary, and that nothing could be substituted for it in the treatment of some disorders. I believe many medical men are of that opinion at the present day.

For the first twenty years I ignorantly gave alcohol in some diseases, as was customary with the profession. Yet at so early a period as 1813, I discontinued it in typhus and typhoid and other fevers, with the most marked beneficial results. In 1818 in all cases of midwifery, and at a later period in *delirium tremens*, and in all other disorders and diseases: from a full conviction of its injurious properties; so that I had lost all faith in alcoholic stimulants, and discontinued their use several years before the formation of a Temperance Society.

For about forty years I have not once prescribed alcohol as a medicine; so that I have now fully tried both ways, with and without alcohol, and I perfectly agree with the Scotchman, who said, "Honesty was the best policy, he was quite sure, for he had tried baith ways." I only differed from the Scotchman, in acting dishonestly with my patients from ignorance. I am now fully of opinion that a more dishonest or cruel act can not be inflicted on a patient than to prescribe or order alcohol as a medicine. Why is alcohol prescribed at all as a medicine, being such a fertile producer of disease? Dr. Trotter enumerates twenty-eight diseases arising from intoxicating drinks, viz.: Apoplexy, Epilepsy, Hysterics, Convulsions, Fearful Dreams, Gastritis, Enteritis, Ophthalmia, Carbuncles, Hepatitis, Gout, Scirrhus of the Bowels, Fatal Obstructions of the Lacteals, Jaundice, Indigestion, Dropsy, Tabes, Syncope, Diabetes, Locked Jaw, Palsy, Ulcers, Madness, Idiocy, Melancholy, Impotency, Premature Old Age, Diseases of Infants during suckling.

One of our medical writers says, "The diseases occasioned by alcohol have been by far more destructive than any plague that ever raged in Christendom; more malignant than any other epidemic pestilence that ever desolated our suffering race; whether in the shape of the burning and contagious typhus; the loathsome and mortal small-pox; the cholera of the East, or the yellow fever of the West—diseases by far more loathsome, infectious, and destructive than all of them put together, with all their dreadful array of suffering and death, united in one ghastly assemblage of horrid and appalling misery."

The late Dr. James Gregory, Professor of the Practice of Physic in the University of Edinburgh, said, "I never got a patient by water-drinking, but thousands by strong drink." The question may be asked again, Why is alcohol at all prescribed as a medicine? The answer will be what a medical man said to me, "I like it." Another medical man said, "Let them have what they like." The general answer has been, when I have closely asked medical men personally why they order it as a medicine—they say, "We could do without it, but it is convenient, always at hand, and the patients like it." Alcohol is a dangerous luxury, it is neither adapted for food nor medicine.

The ancients called it a "delightful poison." I have been long convinced that I should be criminal, were I to give it or prescribe it, either in health or disease. Alcohol is given to gratify an unnatural and depraved appetite, not having

Anatomy, Physiology, Philosophy, Science, or Common Sense to sanction its use; in fact, as a medicine, it is the most dangerous quackery of the present day.

I know of nothing more unphilosophical than the manner in which alcohol, as a medicine, is ordered by medical men; the usual directions to a patient are to take a certain quantity, say, a few tea-spoonfuls, a table-spoonful, or glassful, as the case may be, from vulgar gin to genteel champagne, according to the poverty or the wealth of the patient. The basis of the stimulant principle of these is alcohol; but does any medical man know, when ordering these liquids, how much alcohol they contain? For instance, he orders a glass of port wine: some of his patients will obtain it from the nearest gin palace or public house; others will have it brought up from a favorite bin. The first is probably a villainous compound of logwood, alum, with a certain percentage of alcohol; the second, perhaps, has no other deleterious ingredient than alcohol, of which it has probably twice the quantity of the former; therefore if two patients are ordered the same quantity of wine, one takes as much alcohol again as the other, thus placing the doctor between the horns of a dilemma; the one taking too much, the other too little, according to his idea.

The infatuation even of many of the testototals is such that they dare not employ a testotal doctor, but give the preference to a medical man who will give alcohol as a medicine; so far are they deluded with the false opinion that there is something medicinal in the *mecker*.

Some patients labor under the delusion that they have a peculiar constitution requiring alcohol. This erroneous idea is produced by the force of habit. Alcohol is an unnatural agent, injurious to the whole system; there is no organ of the body adapted for its use; on the contrary, it is a rebel that is thrown out of the system as quickly as possible.

I have found acute diseases sooner cured without alcohol, and chronic disease much more manageable.

I have never seen a patient or any person injured by leaving off alcoholic fluids *at once*. I should as soon expect, as a Dr. Scott has said, "killing a horse by leaving off the whip and spur." I have not heard from my professional brethren, or from any of my patients that my non-alcoholic treatment of disease has occasioned a single death. My greatest trouble has been for many years, in preventing patients from being destroyed by the use of it. I do not say the *abuse*, for I consider the use the *abuse*.

My non-alcoholic treatment of disease has been so satisfactory that I have not once, during forty years experience, been desirous of deviating from it: so strongly am I convinced of the truth and superiority, that I should consider myself criminal if I again recommended alcohol, either as food or medicine.

I have discovered a great truth, and have made a great discovery: that alcohol in every form may be dispensed with in medical and surgical practice, and is not required in a single disorder or disease. What evidence can be clearer or more satisfactory? My practice has been open to hourly inspection and observation, in the center of a large populous town, surrounded by more than forty surgeons and physicians; most of them intelligent and discerning men—surely some one of them would have informed me of my insufficiency or malpractice, had I been in error, but I have heard of no such remark from a single individual, although in daily communication with them.

One medical man said, if he were to withdraw alcohol as a medicine, he should have to alter the whole course of his practice; as if alcohol was his panacea for all disorders and diseases. I have no hesitation in saying that such a practitioner does more mischief with alcohol than all the medicines in his *materia medica* can remedy.

Another medical man practicing among the rich, said, if he were to practice teetotalism and not prescribe wine for his patients, he should lose £500 per year, for most of his patients were wine drinkers." Doubtless he would be discharged and some other medical man would take his place *who would grant indulgences*.

A correspondent of 'The Alliance' says, "I asked a surgeon, a teetotaler, 'Why do you not strike at the root of the evil, by banishing alcohol from your practice, as a medicine?' 'If I did,' said he, 'I should not have a patient in twelve months.'"

A patient informed me that before I attended him he took nothing but whisky as a medicine by the direction of two medical men. To obtain it he went regularly to a spirit shop. On entirely abstaining, his health improved; but the treatment of his disease with whisky had materially and seriously injured his constitution. "*In the physical world there is no forgiveness of sins.*"

The above patient escaped for a time more favorably than a Scotch minister whom I attended, who took a little whisky for a long time regularly, for pains of his stomach, which it always relieved; but he was quite unconscious

that it had produced hobnail liver, in a very advanced state of disease, of which he shortly died.

I have, during the last fifty years, seen thousands of the victims of alcohol, produced by the traffic and prescribing of alcohol; and have noticed the hardening effects on its agents. With poor Burns, the poet, I can say of alcohol what he said on another subject, "It hardens all within, and petrifies the feelings." I once saw a spirit merchant witness a post-mortem examination of one of his wretched victims—a female gin-drinker, thirty-six years of age, in whom every important organ was diseased, but whose immediate death was occasioned by valvular disease of the heart. I expected the spirit merchant who sold her the gin which destroyed her would at least show some signs of commiseration; on the contrary, he stood by the frightfully diseased body as apathetic and as unfeeling as if he had been quite innocent and she had died a natural death.

I have examined the body, after death, of a female patient, a spirit-drinker, whose every internal organ was diseased and softened, indeed so much so, that a surgeon present said to me, "How ever did the parts hang together?" A minute account of such cases is seldom given on an inquest; only the disease of that part which is supposed to be the immediate cause of death. It may be observed here that alcohol has first a hardening effect on the different organs of the body, but in an advanced state of disease they become softened.

The first circumstance which arrested my attention, after being some time in the Temperance Society, was by members saying that they had lost their rheumatism (or gout) since they had abstained from alcoholic drinks. I designated it, at an early period of the society, alcoholism, not rheumatism, as abstaining from stimulants cured them. The improved state of health of many corroborated the truth of that passage in Shakespeare, "Ask God for temperance; that's the appliance only which your disease requires." If abstinence from all alcoholic and fermented liquids were prevalent, we should seek in vain for a gouty patient; proving the truth of the opinion of Doctor Erasmus Darwin, who said he "never knew a case of gout but the patient was addicted to the use of vinous or fermented drinks." I believe, even in hereditary predisposition to the disease, it is probable that attacks might ultimately be prevented by continued abstinence.

I noticed in my new improved method of treating disease the tardiness of recovery in those

patients who were in the habit of taking daily alcoholic beverages, compared with others who were abstainers. This contrast was enforced upon my observation, and accordingly I formed my prognosis, that I could expect no particular amendment until the nerve-poison, alcohol, was eliminated from the system. In severe attacks of disease, patients using alcoholic stimulants regularly were in a more prepared state for disease, and certainly had less probability of recovery.

3. It is almost impossible to relieve patients laboring under chronic disease, while they are daily taking alcoholic fluids.

4. When a patient is in a sinking state from disease, and when a medical man has thought an alcoholic stimulant absolutely necessary to snatch the patient from death; in this case the great danger is, that such a stimulant will extinguish the small spark of life remaining, and that the patient will be destroyed. It was truly said of the Brunonian system, that "Dr. Brown had made no provision in his system for the recovery of exhaustion arising from the effects of taking alcoholic stimulants. Lord Bacon observes, "If the spirit is assailed by another heat, stronger than its own, it is dissipated and destroyed."

5. It is not unusual to give wine or brandy at the apparent approach of death; such a practice is a mistaken kindness. In many instances patients are sent drunk into another world, having their minds beclouded and rendered incapable of leaving a dying testimony to their anxious and expectant friends and relatives. I have heard this commented upon as a very just and serious complaint against some medical men. "Let me go home sober," said an old lady, when urged on her death-bed to sustain her failing strength with brandy. "The medical friend of the late excellent Dr. John Pye Smith, on perceiving a rapid diminution of power, recommended some brandy to his water beverage. This proposal was conveyed to the eye of Dr. Smith in writing, on account of his great deafness. He turned to his wife and emphatically said, 'Never, my dear; I charge you, if such a remedy be proposed when I am incompetent to refuse, let me die rather than swallow the liquid.'"

6. I have had patients apparently in a dying state, who have recovered by giving them very frequently small quantities of light nutritious food, and by particular attention to natural stimulants, similar to those cases I have related in the sinking state of typhoid fever. Shakespeare says, "While the vital flame burns fee-

bly, a little give at first; that kindled, add a little more; till by deliberate nourishment the flame revived, with all its wonted vigor glows"

7. I have been led to observe the very great tenacity of life even in those patients suffering under incurable disease, when they have been total abstainers from alcoholic fluids; and the very speedy death of the very intemperate under similar circumstances.

8. The adage that "wine is the milk of old age" is very erroneous, as it regards our alcoholic wine; it possesses no analogy to milk. Milk contains all the constituents of food, and is the type of food. Dr. Erasmus Darwin used to say, "Milk is white blood." The oldest individuals I have known have lived chiefly on milk and farinaceous food. Such food alone is sufficient to preserve the body in a healthy, cheerful, and happy state. Alcoholic wine is not at all adapted to support or repair the decaying body in old age, but to exhaust the vital powers, produce disease and death.

9. There is a subject with which I have been much impressed, that is, the great and fearful responsibility in ordering or prescribing by medical men, alcohol as a medicine, particularly to delicate females. From my own observation the effects have been most calamitous, in producing confirmed drunkenness. The very slow, insidious, pleasing, and delusive manner in its attack is such, in the commencement, that the patient is totally unconscious of her state. On visiting a lady, I perceived she did not articulate her words distinctly, and on inquiry, she told me she had been taking brandy and water. I thought it right to inform her that if any neighbor were to see her in the state she was in, it would be said that she was intoxicated. She directly said, "If I thought so, Mr. Higginbottom, I would never take a drop again as long as I live." Such an amiable character never expects to come on the list of drunkards. I have known some of the most truthful, beautiful, and excellent mothers and wives arrive at such a state of intemperance as to become a burden to their families and outcasts of society—in a lost state, from which there is no recovery. What compensation can a medical man make for being the cause of such a calamity?

I have been called to a lady dead drunk, when her husband has been under the greatest apprehension of her dying. On the following day the poor inebriate stoutly denied to me that she was ever intoxicated in her life, and that "she only took a little to do her good." I never knew a lady yet who acknowledged that she had taken too much.

A Visit with Father Cleveland.

BY WALLACE NORRIS.

MY DEAR FRIEND:

A FEW days after the reception of the current number of *THE HERALD* found me in the presence of Father Cleveland, in his own home. Introducing myself as one who, desirous of knowing more of his inner life than his brief published letter gave me, had called to glean all I could relative to the habits and hygiene conducive to his long and happy life, he bade me welcome, and drew my chair close up by his side. He laid his steady hand upon my shoulder, and with all the tenderness of a father to a son, he narrated the history of his life.

He was born in Norwich, Conn., June 21, 1772. He was placed in the family of his uncle, William Cleveland, of Salem, Mass., in March, 1784; sailed on a voyage to the Cape of Good Hope in November 26, 1785; was Clerk and Deputy Collector at the Custom House in Salem from September, 1789, to 1802. While occupying this position he saw the handwriting of Washington every week. From 1802 to 1809, was clerk in Charlestown. From 1809 to 1816, was stock and exchange broker in Boston. While in this business he prepared and published a set of exchange tables, giving, in United States money, the exchange from one pence to £5,000; and at from 2 per cent. advance, down to 25 per cent. discount, varying $\frac{1}{4}$ per cent. on each sum. These valuable tables are still in use, both in this country and in England; and a copy of them is carefully preserved in the British Museum.

From 1816, for nine years, he was engaged in mercantile pursuits, under the firm of Cleveland & Danc, on Market Street, now Cornhill. It was about this time Mr. Cleveland became deeply interested in the city poor, and set about devising plans for the formation of a society for their amelioration. For thirteen years he was Chaplain of the House of Correction, South Boston.

For nearly half a century he has been known and honored as "Father Cleveland, Missionary to the Poor." He was married at the age of twenty-six, living forty-three years with his first wife; re-married, living twenty-seven years with his second wife, who died November 21, 1869, in the seventy-fifth year of her age. He is the father of but three children—sons—and but one of them is now living.

Of him he writes, on the 5th ult., "My eldest, and now my only son, is on a visit to me from Texas; and as I had not seen him for twenty years, you may be sure that he was embraced with no small heartiness."

The Salem (Mass.) Register of the 8th ult., says, "We were gratified yesterday to receive a call from J. T. Cleveland, the only surviving son of the 'Rev. Father Cleveland.' He is seventy-three years old, and is as active as men usually are at forty—presents no evidence of the inroads of age, and says that the climate is so salubrious where he lives that he will be obliged to come to Boston to die."

The distinguished scholar, linguist, antiquarian, and withal a consistent, sincere Christian, Prof. Chas. Dexter Cleveland, who died in Philadelphia, July, 1869, at the age of sixty-seven, was also his son. His youngest son died twenty years since, at the age of thirty.

His ancestors were not long-lived, his mother living but to the age of thirty-five and his father to seventy-one. He attributes his longevity to his mode of living; and, although it has been a life of constant, uninterrupted activity, it has been one replete with joy and happiness, as his bright, cheerful, radiant face and sparkling countenance of to-day will testify. His diet has been simple, nourishing food, plainly prepared. His supper is invariably very light, consisting of a few crackers, which he prefers to any thing else, and are always kept on hand for him at this meal. Eats very sparingly of best beef steak or mutton, making breakfast his principal meal. Every morning at this season of the year, at 5 o'clock, he can be found with toilet perfectly arranged, down stairs in his cozy little room or office, at the desk writing or reading, or both. After breakfast he spends the entire forenoon, or till nearly 2 o'clock—the hour at which he dines—in visiting the abodes of wretchedness, degradation, and misery, in the byways and lanes of the city, relieving the wants of the occupants, feeding the hungry, clothing the naked, and ministering spiritual comfort and cheer as well as temporal salvation. I can not tell you how surprised I was when I was ushered into his presence. Instead of finding the decrepit old man my mind had pictured out, I saw the cheerful, agile, supple semi-centarian. I had

been somewhat prepared for this change, inasmuch as I was obliged to call the *third* time in order to find him in; but my imaginary photograph had not been worked up in glowing colors enough. I was astonished to find none of the tremor and nervousness usually attendant upon old age. He writes a beautiful, legible hand. In early manhood, he told me, he used tobacco—chewed, and then smoked for many years, until he became convinced that the *nervous* weed was feeding upon and sapping, not only his vitality, but his enjoyment, happiness, and equanimity of mind. He abandoned it *at once and for ever*. Ere long his nervous system was restored, and his sweetly-refreshing sleep and happy frame of mind returned.

Said he, "Suppose I had continued the use of tobacco, and taken a little stimulant of some kind occasionally, do you think I would have lived to be the hale old man that I now am?" His health is very good and has been all his life, with the single exception of a severe attack of pneumonia twenty-five years since. He knows nothing of biliousness, nor has he ever experienced any thing like dyspepsia, with its innumerable train of attendant ailments and evils. He regards gluttony, or intemperance in eating or drinking, as the prime cause of disease, and thinks there are few who do not eat to satiety. One of the things upon which he lays much stress is, attending to the demands of nature *instantly*, particularly that of evacuation. Said he, "My young friend, it is the fashion of the world to go out night after night (especially during the long winter evenings), in quest of *pleasure*, to the theater, the ball-room, or some other place of excitement, where the best hours of the night are spent in a sleepless and highly-wrought nervous condition."

He remarked that he could see no valid reason why any one should be worthless, useless, or inactive in old age; that his mind is very nearly as vigorous and active as ever, and can now readily memorize whole chapters of the Bible, and paragraphs or entire poems from Milton, Young, or the modern poets. He recited for me a choice selection from Young, his favorite poet, and added that when he retired at night these memorized thoughts or verses were his anodyne. He would repeat a chapter or two from the Bible, or some poem, until, *lost* in the gentle, soothing arms of Morpheus, he was released; and awoke ever in time to greet the early morning hours. These persons, said he, go out to seek pleasure or happiness, but, virtually, they never find it, and always return home *empty*, whereas, if they would but spend

their evenings properly at home, instead of keeping these "late hours," that which they are constantly seeking and never finding, except in the transitory joy of an hour, would *come to them* in an *abiding form*. Wisely and justly does he condemn these so-called evening entertainments. With a conscience void of offense toward God and man, sleep to him is sweet, refreshing, and invigorating.

Sabbath, May 27, he preached to the inmates of the institutions on the Island—an audience of one thousand or more persons. For the 25th inst., the Sabbath next following his ninety-ninth birthday anniversary, he has already made two appointments. In the forenoon he preaches at the Seamen's Bethel, and in the evening at the Old Ladies' Home, in Charlestown, at one or both of which places I expect to hear him. He remarked that no idle or indolent man ever *was* or ever *can be* happy. His eyes are good—clear and sparkling yet—although he has used glasses more or less for nearly half a century. He lost his natural teeth some fifteen or twenty years since. These were preserved by the free and simple application of pure water. I think he is about five feet six or seven inches in height, and weighs perhaps 140 or 150 lbs.

On leaving, he gave me several small books and leaflets—recent poems of his own production—a fine cabinet-size portrait of himself, with his autograph and a few lines inscribed thereon, and a very cordial invitation to call and dine with him some day.

This true and life-like portrait will be ever regarded as one of my prized treasures, and shall prove a constant reminder of my pleasant visit with this dear, good old man, long years after he shall have passed to his home in that land where we will never grow old.

His whole life has been one of ceaseless activity, and his walk and work of nearly one hundred years in virtue's paths has proved a perennial feast. Now he is *all alone*, biding his Father's time for the pale boatman to come, to guide him safely over the shadowy stream to that land unseen by mortal eye, where darkness or shadow never comes.

Boston, June 1, 1871.

BRAINS AND IGNORANCE.—The range of human knowledge has increased so enormously that no brain can grapple with it; and the man who would know one thing well, must have the courage to be ignorant of a thousand and other things, however attractive or however inviting.

Flying to Shelter.

BY ELIZABETH OAKES SMITH.

WHEN slanderous tongues do me assail,
 And lying lips do on me rail,
 Thy help, my God, will not me fail—

 They turn their evil ways on me;
 Such as they are, would make me be.
 But I am known, all known to Thee.

 Known unto Thee the secret thought
 Within the soul's deep chambers wrought,
 And hence to me great peace is brought.

 I lift to Thee my sorrowing cry;
 Turn unto Thee my streaming eye;
 Unto Thy sheltering Rock I fly.

 O'ermastered by these woes at last,
 I in its cleft will hide me fast,
 Until the storm be overpast.

 Thrice, thrice the dreadful bolt has sped.
 I saw it fall on each dear head,
 And lay them lowly with the dead.

 One sleeps beside yon tranquil lake;
 O'er one dear grave the palm trees wake;
 And over one the billows break.

 Oh, do ye mock from your bright sphere,
 The anguish which we suffer here—
 The bursting sigh, the bitter tear?

 Oh, doth the venom'd whisper fly
 From this dark earth to your pure sky?
 Or here doth Slander live and die?

 Great God! in Thee my help I find!
 The mills of time may slowly grind;
 They can not crush the constant mind.

When Should Children be Taught to Read?—Sham Kindergarten Culture.

BY ELIZABETH F. PRABODY.

MR. EDITOR—Dear Sir:

PERHAPS you may think Kindergartens have taken up enough of your pages to give place advantageously to other topics. But when I remember your genuine interest in the early training of children, I feel confident that you will let me say a few words to ward off a new danger that threatens the cause. It is from the misunderstanding of those who are looked up to as guardians and guides of the public weal. I am induced to take up the pen by seeing a recommendation of a young ladies' school, which I have no doubt is a good one, over the signature of one of our most prominent men, justly regarded as an authority in all good works. The words I regretted were, "The lady successfully translates what is of use in the Kindergarten into our American uses." With all respect to the writer, I must say that no one thoroughly acquainted with Froebel's system could have written the sentence. I have heard others use similar expressions, asking, "Can the Kindergarten be adapted to American wants?" or, "Is it not putting off mental work too long, and making school a mere play-ground?"

To the first query I would reply, How can climate, or political institutions, or language and customs make any difference in the proper treatment of children's brains, or with the true order of mental development? Froebel studied this order like a man of science, as he was. It took him more than twenty-five years of thought and practice combined to make out his system. Many an intelligent mother and good teacher have happened upon isolated points of his training, but in forty years of practical teaching, twenty of which were in schools, and the rest in families, my own and others, I have never known a truly philosophical or scientific plan of early education till I knew Froebel's. No one who has ever seriously and persistently engaged in this work, can have failed, I think, to ask herself whether she has followed the best plan of doing it. For my own part, with whom teaching has always been a passion, I was always asking myself the question, and many is the book of education I have sat down to read, with a hope in my heart that one perchance wiser than myself had found out the secret—the *true order of the development of the faculties*. I soon found out that reading and spelling were but a

very small part of education for little children, and was often led to postpone these to a degree others thought very objectionable; but only in isolated cases did I apprehend that it ought not to be allowed at all at a very early age. Froebel has convinced me that education should begin with the training of the senses. Like all great discoveries, when they are made, it seems a very simple truth now, for we know that children are the victims of their senses, and that nothing can effectually release them from the thralldom but an intelligent and legitimate use of them, and by their control, through the culture of the highest sentiments. Froebel's eye was ever upon the culture of love in the child?

The first propensity developed in a child is to seize upon what it wants, and it is not often, certainly it is not systematically opposed by teaching it to impart that precious something to one it loves, or at least to share it. In short, *now we know*, we see how true it is that the child itself should be the guide in our plan for its culture, by that natural development which the Kindergarten teacher skilfully organizes, but does not controvert. To controvert it excites only passionate opposition. To organize it makes it the instrument of progress.

Is not every child that is born under the sun a subject for this system, so far?

To the next question, "Is it not putting off mental work too long, and making school a mere play-ground?" I would reply that the amount of culture secured by this mode of developing the mind—by the aid, I mean, of its own *well-trained senses*—is incomparably greater than any that can possibly be given to children by mere reading, or by abstract counting or repetition of facts. If no child ever learned a word till it knew something to talk about, it would be well, and this system almost insures that process. It is easy enough to teach some children the words *cat*, *dog*, and other names of things, if they are placed under the picture of the same, but to teach them in any other way is in my opinion cruel, not because they suffer for each word visibly, but because it is an unnatural process, and when applied to words that do not even suggest an image, a difficult one. In the infancy of the race, picture-writing was the first mode of expressing ideas otherwise than by the voice. Then came hieroglyphics which are

symbolical, and at last these were reduced to letters, also symbolical of sounds and qualities, but we give to little children this late product of the mind of the race for their first brain-work! I have taught several hundred children to read, and always suffered in doing it, when they were not as old as six or seven, because I sympathized with the painful effort of brain. I was the first person (as far as I know) who devised the way of teaching by words instead of letters, and that was to a little Spanish boy of six, and because I saw no other way, but even that easy way was hard for little tots of four or five. I have elsewhere recorded the case of a poor little mortal I was trying to persuade to be "good" one day, by which I meant to look at A and B, and of whom, when I saw that my expression "try to be good" brought tears into his poor little eyes, I inquired "What does it mean to be good, Lewis?" He replied in a loud burst of grief "Ter be whipped!" I was too soft-hearted to make my little disciples suffer much in the pursuit of knowledge, and never committed the sin of punishing them for unavailing efforts, but I did beguile them in obedience to the wishes of parents oftener than I now like to remember. I gratefully acknowledge the boon many good mothers granted me of waiting till I was ready, and now that light has burst upon us, let us give up our prejudices and take the good way. The time of little children previous to seven years of age is not so valuable as the condition of their brains; but in this system of instruction the time is far better spent than formerly. No one who has had much experience can have failed to observe how much shorter time it takes for children to learn to read after they are six years old than earlier. In our language, the anomalous pronunciation, or spelling, or both, makes the process more difficult than in most others, and we do not teach it in the most philosophical way, or the easiest way for children. It can be taught by using the Continental or Italian alphabet so as to serve for the pronunciation of Italian, Spanish, German, Swedish, and even French, and by postponing it till a little maturity of observation is attained, we gain thus a very great advantage. This is only mentioned as an additional reason why we should adopt Froebel's principle upon the subject, instead of "adapting his system to American wants," which really means only to American prejudices, the sooner given up the better. I question whether another point could be found in which any one could suggest a change. Let me illustrate a little, to show that we do not wish to put off the period of learning to read

because it is troublesome, or to substitute play for earnest work. The words earnest work may alarm some persons who fear too early a stimulus of any kind. No one can deprecate the premature stimulus of the brain more than I do. Idleness itself is better than that, when it is possible to keep the Devil away from the idle. I am thinking of thousands of little three-year old creatures who might be cherubs, but who live in gutters, and hear wicked things said, and see wicked things done all the time. If the three years apprenticeship to evil could be changed to three years of blessed work made out of play, the primary schools as now organized would receive a very different set of subjects from those who now frequent them.

The first Kindergarten teaching to an infant is to give it little balls of beautiful colors to play with, that its eyes may learn to discriminate colors, that its little fingers may become developed and pliable by holding and catching them. Many little games with them may be taught by the mother, or the carefully trained nursery-maid, to develop heart and mind, and to exercise the limbs. In a more advanced stage of instruction in the school, for instance, it is shown a ball and a cube together, and by judicious questions is taught to observe the difference between the two forms, that one is round, the other square; one has corners and edges, the other has none; one has one surface, the other many; one will roll, the other will not; one can be caught in the hand without pain, the other can not be. The child is told that the ball is the shape of the earth (with a slight modification that can be shown at the moment by a gentle pressure of the thumb and finger), and that it is the fundamental form of every thing else. When the ball and cube have been clearly discriminated and discussed, and the child understands all the words used about them, they are compared with a cylinder of the same general dimensions—its likeness and unlikeness to both suggested, and then described by the child in answer to questions. These lessons will need much repetition, and form the topic of many half hours of talk. In a more advanced stage still, a small lump of wet clay is given to the child, which he is told to mold into a ball. It is a difficult work, and takes repeated efforts of the little hands. When it has been successfully done, it is proposed to make it into a cube, not by cutting it, but by pressing it upon the table on opposite sides, until it assumes the required shape. No particle of it is to be cut off or left, and when the child is afterward allowed to make any thing else of

it—and this modeling is a very entertaining series of lessons, the principle is inculcated that none of it is to be left; that there is nothing like rubbish in the world, but that every thing on this ball of earth, where God has placed us, can be turned to some use. We all know how the vivid imagination of childhood sees whatever it wishes to see in its playthings. Instruction like this teaches it to invent and create forms as well as to imagine them, and whenever it has a pile of cubes or other blocks to build with, the same principle is instilled, that every block must be put to use, and if one or two are left after following the law of symmetry with the rest, and it is not desirable or is too wearisome to begin again in order to work them in, they can be called men who are looking at the structure; an account is also required of the structure, its design, or its use, or what it is meant to resemble. The chaotic world is to be reduced to order as far as any part of it is used in lessons, that ideas of symmetry, precision, beauty, or use may be incidentally taught. So in the weaving of colored papers, every strand is to have its right place and its opposite, while the use of the weaving-needle, and subsequently of the thread-needle makes the little fingers pliable and deft.

The same principle is followed in the simple plan of drawing, out of which flowers forth such lovely forms. The folding and cutting of paper, done accurately, and by a rule, so as to insure pretty shapes, has far deeper significance than the mere making of paper boats and flowers. Every fold must be true, however many attempts at accuracy it involves, and a child very soon becomes sensitive to any wry crease or crooked cut, and is led to see the way in which either mars the final result of his little labors. Cubes are subsequently divided into pyramids, and these again into still smaller ones, so that cubes, pyramids, and bricks (which is another form of cubes—two in length and one-half in width) give great scope for building. Surface blocks, of a still greater variety of shapes, are used in progressive lessons where fundamental principles are given. All these occupations are to be used, when understood, in free invention, which (like free will in man) is never with impunity allowed to violate these fundamental laws. The cube root is handled and practically understood, long before the time when mathematics are learned from books. So of trigonometry, which we know from our own Dr. Hill, can be practically taught before a scientific word is attached to the diagrams made with surface blocks. Lessons upon sticks

of one, two, three, four, and five inches in length cultivate another class of ideas, and can be laid in beautiful forms, and also made into transparent solids, by being united with moistened peas. As much arithmetic as children under seven years ought to learn, is taught by the various countings, additions, subtractings, and dividings involved in weaving, drawing, and block lessons. How much better conception a child has of a hundred who learns how it looks, than merely by the time it takes to count it.

The growth of plants from the very seeds is another important branch of Kindergarten culture, and teaches Nature's laws as no deception can do. The observation of insects and small animals, in comfortable circumstances, like a frog in a dish of moss and water, or fishes and shells in an aquarium, is desirable. The true Kindergarten teaches—indeed, brings in all her knowledge of Nature and Art, and must be herself pervaded with it. There is no craft or art that is not provided for, in this mode of developing the child, at an age when it wishes to examine every thing, and make every thing its self. The longer children are disabled from reading, even the books and papers provided for them, the better. If nothing is told them but by careful parents and properly-trained nursery-maids, evil may be kept from them much longer than if they can read the crude or the cruel literature provided by the greed of authors and publishers. This consideration, added to the one that deprecates the too early action of the brain involved in learning to read, should be enough to answer the objection made to this feature of the Kindergarten system.

One valuable principle incident to it is its slowly-progressive character. Nothing must be forced or hurried. Each one must be allowed to develop at its own rate, as one may say, without having the passion of emulation stirred, which lies *perdu* in the human soul.

I have dwelt upon some of the minutiae of this mode of instruction, in order to convince some inquirers and doubters that there is some thing in it "not yet dreamed of in their philosophy." I am far from denying that many children have received items of kindred instruction from good and intelligent mothers, and that many teachers have partially discovered the truth that all a child's faculties must be carefully trained, but where is the proof of this having been reduced to a system till Froebel did it? Pestalozzi's experiment, good as it was, did not attain to it—no one followed

up to their solution the hints Nature gave, before Froebel did it. Thousands and tens of thousands of the best educated people will tell you that many of their faculties, particularly their artistic faculties, were left wholly untrained; many young mothers lament their utter inability to instruct their own children, even if they have the leisure to do it. Froebel was mindful of mothers, and induced many to attend his lessons.

Teachers who give their schools the name without due preparation are less excusable than some of their apologisers, who may be supposed not to have looked into the matter, but that is a neglect which can not be pardoned any one who makes the profession of knowing what she has not studied.

The imperfection of schools, and the disastrous effects of them as generally administered, upon the moral natures of children, lead many to sequester their little ones too much from companions of their own age. The sooner they are put together, *under good guidance*, the better, but that requisite is imperative. The circum-

stances must be such as to insure the tenderness of the mother to each one, the defense of each one against the encroachments of the rest, and the unexcited, healthy, natural action of the mind. Imagine oneself looking down from a balloon into all the unroofed nurseries of a city. To these most of the children of the wealthy are confined for the greater part of the time, and under what influences? One shudders at the spectacle, and does not wonder that rich men's sons, for instance, do not turn out well, for they learn there what they may never unlearn. Look at the little denizens of hovels, from which even the mother's love is banished by her daily necessity of finding work to feed hungry mouths; and watch the poor little frequenters of streets, gutters, and stagnant pools, in both cities and suburbs. Under our institutions some of these children may in future take rank, and perhaps outstrip, in worldly honors, the pupils of the aristocratic nurseries, that have been educated by the Catholic Irish as truly as those in the street! Let us have Kindergartens!

THEORIES PUT IN PRACTICE;

Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSEALL.

WEDNESDAY, March 14.

MADGE having asked for her bill, the Doctor brought it to-day. He inquired of me her circumstances, and I told him that she had some money in the bank, but still was poor, being almost dependent on her wages. He diminished his bill by one-half, and left it with me to give to Madge. I thought that she would be pleased and grateful, but she flew into a passion, considering it a serious injustice and imposition to be obliged to pay *any thing* for having her life saved; for this is indeed the case. During several days of her sickness the doctor did not think it possible that she could live. Madge now says that she owes nothing to him. My indignation was so great at her ingratitude, that I did the only thing I could do, forbade her speaking of the subject to any one in the house. She could hardly be punished more severely than to be obliged to keep silence upon any matter of interest to her.

Thursday, March 16.—While they are still fresh in my mind, I will record some things which Mr. Welsh told me the other day. When quite young, he loved a young lady of great beauty of person and character, and his love was returned. Just at the time they were to be married he was left fatherless and motherless, and with three sisters and a little brother dependent upon his exertions. With a heroic spirit of self-denial, he deliberately made up his mind to sacrifice his own dearest inclinations, and to give up such a portion of his life as might be necessary to providing a good home and education for his sisters and brother. The lady whom he had loved was as heroic as he, and sustained his hands in the long, hard struggle which he endured. He conquered at last, and cheerfully too, for this he felt to be essential to his success. He was successful in business, and educated the whole family in accordance with their refined tastes and natural capacities.

When it was all done, and he could have married, the dear one was gone, except from his tender and loving recollection. As far as he can have it in this world, he has had his own reward in the gratitude and loving care of his family.

Mr. Welsh has been quite a musical proficient in his time; and, until he was seventy-three years of age, he led the choir in our church here in Lightwood. Henry says that he was a beautiful picture, with his delicate spiritual face glowing in sympathy with the feeling of the music he was interpreting, when engaged in training the choir in something new to them. His own voice was a clear, pure tenor, free, to his last public use of it, from the tremor so common to the voice of old age. It was the earnest wish of the choir, that he should continue with them, but he insisted that he was too old; and very soon after he was incapacitated for it by the loss of his health. Then came the loss of his property, and he the other day alluded most feelingly to the delicacy with which the church redeemed his valuable organ and his large collection of musical works, and gave them to him as a token of their appreciation of his former services. When living in New York, he was usually well acquainted with the celebrated singers, and speaks in specially high terms of Jenny Lind; for, as he says, "there was not only a voice, but a soul." In one of his musical conversations with her, he told her that, by some critics, she was accused of affectation and exaggeration in her singing of "I know that my Redeemer liveth." The tears started to her eyes, she rose from her seat, and clasping her hands together, walked rapidly up and down the room, repeating "Ah, they should not say that, they should not say that!" Mr. Welsh says that her uplifted face seemed to him almost divine, and that, thereafter, her singing of these noble words, was, more than ever before, the expression of the most perfect and yet childlike trust and confidence in their truth.

Friday, March 16.—The few lovely Spring days that we have had make the house seem so close and unspringlike, that I have resolved to commence house-cleaning early, that the house may share the freshness of nature. And, at the same time, I have resolved upon another thing—that this operation of house-cleaning shall interfere as little as possible with Henry's comfort. It is not surprising that men should be made miserable by that kind of house-cleaning in which the whole house is in confusion at once. This, as well as all kinds of house-work, should

be conducted in such a way that nobody should experience any discomfort from it. Bridget finished ironing Tuesday, and Wednesday morning, after having the attic thoroughly swept, I took her into the large spare room, and assisted her in carrying out the lighter furniture. We then called in the young man who does Henry's stable work for him, and he aided Bridget in taking out the heavier furniture. Bridget then went vigorously to work, and all was done in such good season, that the room was in complete order when Henry returned to supper. I hope that I shall be as successful in carrying out my wishes in regard to the house-cleaning, as I have been in keeping "blue Monday" out of the house.

At the very commencement of my house-keeping, I decided that the washing should be an event of sufficient importance to make every one uncomfortable. Instead of the old time, sodden, warmed-over Monday dinner savoring strongly of "suds," I myself cook the dinner on Monday, making it as nice as possible so that not one thought of its being Monday shall enter the mind of any one.

Monday, March 19.—I took Madge to her brother's to-day, and think she is in a fair way to recruit rapidly. Aunt Minerva after her usual visit from the Deacon last night, announced to us her intention of being married the first week in May, and asked our permission to have a small wedding entertainment. We gave our consent with but one condition, viz that the guests should not be served with wine. Aunt Minerva agreed to this only because she knew that there was no other course for her. And now, while she remains with us, I must make every thing as pleasant as possible for her. She has been more trying and disagreeable than before, since the scene we had with her in the winter, for she then adopted a manner which says as plainly as words that she considers herself much aggrieved.

When Henry and I are alone we speak of her "martyr air;" but to laugh at it affords only a little relief. It is very hard to be constantly with a person who preserves a gloomy silence, only volunteering a remark when necessity requires it, and vouchsafing only monosyllabic answers to inquiries. I have striven earnestly to be cheerful and pleasant, but have sometimes failed to resist the depressing influence of Aunt Minerva's manner. We would be willing to apologize, if we could see that we had been at all in the wrong; but time only confirms us in the opinion that Henry took

right course; and therefore to apologize would be to falsify ourselves.

Wednesday, March 21.—To-day, the air being mild, with hardly a breeze, I gave Miss Clinton a ride. She is a "chronic invalid," having spent most of the last thirty years in bed, but occasionally rallying and going among people for a few weeks at a time. Henry holds a theory in regard to such cases, which is not original with him, but which needs the test of careful and judicious practice to prove its correctness or incorrectness. He claims that such people are afflicted with mental disease, which assumes the form of imaginary physical complaint; and he thinks that the firm and commanding, but gentle treatment, which is adopted with the milder forms of insanity in asylums, is what is required.

Miss Clinton has been attended by all the older physicians of the vicinity, until she has become a standing joke among them. One of them is reported to have said that he considered Miss Clinton so hardy, and so toughened by her chronic invalidism, that she might be thrown over the house with impunity. During the past winter she has been better than usual, but is just showing symptoms of relapse. Henry thinks a great point would be gained, if he could keep her from this. So he has ridiculed her notions just enough to keep her in a state of half-indignation. This part of his treatment he calls "mental mustard." He is not afraid of being discharged, for he has won the family to his way of thinking, and they are ready to assist him to the best of their ability. Miss Clinton was sure this morning that she should catch her "death of cold," but Henry, in his contagious way, laughed at her, telling her that he thought a good, hearty cold might do her good. We rode about three miles, and I tried to keep her from talking of her symptoms and feelings, but was not particularly successful.

Thursday, March 22.—The meeting of the Society was very fully attended yesterday, for the question to be answered, "What sewing machine shall I buy?" is one of very general interest, and of much more importance than one might think, without giving the subject close consideration. When word was sent to me, and I was asked to give my opinion in fall, of the machine which I have, my first thought was, What moral bearing has this subject? I soon saw the connection, and was prepared for the train of thought, which was followed out at the meeting. Mrs. Hutton first read a paper in *The Atlantic*

Monthly, by Parton, upon the subject of buying sewing machines, which is capital, as far as it goes. We all acknowledged the truth of his statement, that when a lady had made the tour of the different sewing machine establishments in New York, she was more unprepared than at first for selection, and indeed was in such a state of bewilderment as to be unable to distinguish a sewing machine from a wheelbarrow. This remark led Mrs. Hutton to the expression of her own thought, that it would be well, if every one before purchasing a sewing machine, should consider her own temperament, whether nervous or otherwise, her faculty for the comprehension of machinery, and her manner of doing work of any kind, whether careless or the reverse. For these three considerations ought to determine in a great measure, the particular machine a person should buy.

Mrs. Hutton had requested and obtained, the written opinion of thirty ladies, of the machine in their possession. Seven of these ladies owned Wheeler & Wilson machines; four, the Florence; five, the Grover & Baker; eight, the Willcox & Gibbs; three had hand machines, and the remaining three represented the Weed, Singer, and Finkle & Lyon machines. The letters were read in this order. One lady said that her Wheeler & Wilson was the greatest of mechanical blessings; that she had used hers for ten years, and had never experienced any trouble from it. The next wrote much the same as the first, except that the machine would have *freaks*, at which times its owner was in the habit of shutting it up like a naughty child, and leaving it until it was ready to behave! Rather an inconvenient arrangement if one had much work to do! Four of the Wheeler & Wilson ladies wrote that this particular machine was undoubtedly the best in use; but they were equally agreed in accusing it of remarkable fits of obstinacy. The remaining one came much nearer the truth in writing that she did not think the Wheeler & Wilson machine could be the right one for her; she had a great deal of work to do, and could not spend time in making efforts to discover the cause of disorder in the machine. She needed one which required little faculty to understand, for she was well aware that she did not possess this. She would be glad to exchange her machine for one more easily managed. The owners of the Florence were all convinced that they had the best machine in the country, for did it not possess a reversible feed, etc., etc.? But they must confess that they did not understand it. They had had them, respectively, from one to four years, but knew no more about them

than when they first bought them. The Grover & Baker ladies wrote that, for some purposes, their machines were very fine, as for embroidery, braiding, etc., but they complained of their want of economy for ordinary sewing, and of the heavy seam on the wrong side of a garment. Six of the Willcox & Gibbs ladies wrote most enthusiastic letters, claiming a string of advantages for this machine longer than those of all the other ones combined. Two alone complained of its sewing ripping easily; and, as they were present, Mrs. Hutton at once questioned them about their habits in the use of it, and found that they were not in the custom of fastening the ends of the seams. The other ladies called its ripping easily one of the chief points of excellence in the Willcox & Gibbs machine, and two of them had made a discovery which, they said, entitled this machine to lay claim to the advantage of great *economy*, which, they thought, had never been enumerated in the advertisements of its good qualities. Every one acquainted with this machine knows that it uses a good deal of cotton in the first place, much more than lock-stitch machines, and they also know, that in the case of sewing incorrectly, the seam can be ripped, and the cotton used a second time; while in the lock-stitch machines, it is all wasted. But these two ladies, in a very long use of the machine, had learned that all the cotton used could be turned to a second account. They said that, when a garment was worn past use, or needed alterations, they invariably wound the cotton raveled from it, and made use of it in basting, or in over-casting the rough edges of seams. The ladies owning the hand machines liked them very much for persons unable to use the treadle machines, but acknowledged that sewing could not be done as rapidly nor as agreeably as by the other kind.

If a woman has a clear head, no nervousness in her composition, and understands the complications of machinery easily, then she may dare to invest in a good lock-stitch machine, and it will undoubtedly be a source of great ease and comfort to her. But, if she is nervous, and hurried with work, and has no knowledge of machinery, a Willcox & Gibbs machine will be an invaluable blessing to her, while a lock-stitch machine would only increase her labor of body and mind. Mrs. Hutton called to mind the fact, that a large proportion of American women are of this class, who are overworked sometimes physically, sometimes mentally, and often in both ways; and remarked, that every mechanical assistance afforded them should be of the very *best* kind; and that the *moral* benefit of

this course would be in setting women free from the nervous worry, which disables them from doing any thing but the veriest plodding, and keeps them from comfort and enjoyment of life.

Saturday, March 31.—To-day Bridget finished the house-cleaning, with the exception of some rooms which I thought should be left until more settled weather should arrive. In order to finish to-day I found it necessary to assist myself nearly all-day; and for this purpose, wore a calico dress until the time I expected Henry home. As usually happens upon such occasions, I received a number of calls, all from persons who know how to make allowance for necessary departures from custom, excepting one from Mrs. Mackenzie, who is so exceedingly proper and bound by etiquette. She has not been here before since she met Mrs. Fiddler in the Fall, and attempted to condole with me to-day upon my acquaintance with so *common* a woman. She said to me, "How very annoying it is, Mrs. Sanborn, to be obliged to know people so much beneath us! But we have to submit, with such a Government as we have. I often wish that I had been born in England, or some other country where I might keep aloof from the common herd." This made me indignant, and I told her, much apparently to her mystification, that Mrs. Fiddler was one of my most valued friends; that, although I could never be benefited intellectually by intercourse with her, I could be morally and spiritually, for she is one of those rare characters who never say an unkind word, never do an unkind act; and, as far as one can judge, do not even think uncharitably. And she is bringing up her children in this same lovely spirit of thinking and doing no evil. Surely such a woman is worthy the esteem of any one. I all at once discovered that I had gone beyond Mrs. Mackenzie's depth—she sat gazing at me with the immobility of a statue, with the exception of an occasional glance at her faultless attire. At the first pause, she exclaimed, "What a *sweet* young minister we had on Sunday! Were you not perfectly delighted with his *bee*—*antifal* sermon? Such imagination—such eloquent words—and ah—ah—" I replied that he certainly used fine language, but common sense came to my aid, and restrained me from giving my opinion of the young Cream Cheese, who officiated for Dr. Hutton last Sunday, and who was a fair representative of a class of young ministers now starting up in this country, who, I fear, will do the church very much harm, and who ought to be kept out of it at all hazards.

Just a Thought.

BY FRANCES DANA GAGE.

IF we never wasted our sunshine,
Or hung it in borrowed shrouds,
We might save enough, most any day,
To gild to-morrow's clouds.

And even if rain came pouring
Now and then, a chilling stream,
If garner'd well, we'd have in store
For every drip a beam.

I don't know how it is—there're some
Can never get things right :
But yesterday, it was too dull ;
To-day it's blinding bright.

In the spring they long for summer-time ;
In summer sigh for fall ;
And while the autumn forests glow,
Think winter best of all !

"It is too cold !" the birds can't sing ;
"Too hot !" it wilts the flowers ;
And something, somehow, all the time
Will cloud the sunniest hours.

If such would keep a strict account
Of each, the goods or ills that come,
They'd always find, on footing up,
The good the heaviest sum.

For every day of storm and cloud
Three sunny ones, at least ;
And five soft, sunny, genial winds,
Where one is really east.

Then bless the Lord, and cheerily
Accept Dame Nature's plan,
Resolved to make the best of it,
And better it if we can.

And, like the bees, just take the sweet
Where poison might be found ;
And gathering honey all the year,
Go scattering it around.

Home Life.

BY REV. CHARLES H. BRIGHAM.

IT is the boast of the Anglo-Saxon race that *Home* is one of their peculiar possessions or inventions; that the Latin races have no inheritance in it, and do not understand its meaning. No doubt this boast is more in word than in fact. If the French have no word for home, they show illustrations of domestic beauty and comfort as real as any in English cottages, or in American brown-stone fronts. The finest pictures of family life are found in some of the towns of Lorraine and Burgundy. But home is unquestionably a matter of more pride on the Northern than on the Southern side of the Channel. Your Englishman is never tired of insisting on that legal axiom that a man's house is his castle, or of repeating Dryden's borrowed phrase that home is his "sacred refuge." To a Frenchman home may be dear, but it is not sacred, like the Church: he has no altar in it, and his gods are not there. He is no more secure there than in his workshop, or in the street. There is no song in his language which holds the sentiment and the sigh of that "Sweet Home," which has for the Saxon of every grade of culture an inexhaustible charm.

Home, in its proper and lawful meaning, implies a house, in which one has not only habitation, but ownership. A house from which one is liable to be turned out at the caprice of a landlord, or in which one may not drive a nail without risk of a suit for damage, a house which is only leased, even with a long lease, can not be home in the fullest sense. Yet Americans, the most restless and vagrant of people, have almost transformed in their speech the meaning of the old word. Did not the valiant General of the Potomac army proclaim that his home was in the saddle? Do not the railway conductors, and some travellers too, aver that their home is on the road? In the valiant song of Britannia, her home is "on the deep," and a favorite lyric connects a home on the rolling deep with a life on the mountain wave. There are clerks in the cities, who tell you that their homes are half in the "store" and half in the restaurant; they sleep in one place and they eat in the other. The unfortunates who dwell in boarding-houses, and their name is legion, can blushing send out "at home" cards for their wedding receptions. The portly bachelor feels himself perfectly at home in his well-furnished "hall."

And even the ease which one may take in his inn is imagined to be a consciousness of home by the denizen on the fourth floor of a fashionable hotel. Even the Oneida Communists talk about their "homes," and probably Diogenes was at home in his tub.

The sacredness of home is considerably impaired by this lax style of applying the word. When hotels, and boarding-houses, and tenement-houses, and restaurants, and railway cars can claim this name, the fine old sentiment will vanish out of it, and the song so sweet that there is no place like home become only a dying echo of a lost joy. Indeed home comes into some phrases in our speech, which seem to take away its credit. The school-boy feels insulted if his playmates call him a "home-boy;" it is as much as to say that he is a milk-sop, a baby, and wanting in spirit. Home-sickness is a malady of which all are ashamed, and which those who feel are careful to conceal. No American soldier would desert his ranks, when the band of the regiment ventures to strike up "sounds from home," even if the melody were more noble than the music of "cow bells"—the Swiss weakness has no parallel on this side of the Atlantic. Division of homes is possible here, and the man who is rich enough and lavish enough may have several homes at once, each with a valid and an equal title to the honorable name. Daniel Webster had at once a home among the New Hampshire hills, by the Marshfield sea-shore, and in a street in Boston, to say nothing of his home in Washington. Prescott, the historian, had homes in Boston, in Lynn, and in Pepperell, and divided his time among them. The Mormon Bashaw may boast that he is at home in every town in his territory. If the statement be true, that he owns a house and has a wife in every town. Nay even we may have two homes in the same house, as he occupies one part in the winter, and another in the summer. We know of a man in Massachusetts whose house was on a border line between a city and the adjoining town, and who could change his home from town to city by going from the west to the east chamber. The double home under one roof was contrived when the tax-gatherer came round.

While these and other habits are likely to impair the traditional sacredness of home, it is a

be more important to insist upon home life, the most conservative of all good social influences. The nomad tastes of our people, strengthening continually by the facilities for travel, must not destroy the dear old home feeling, so bound up with the holiest of memories. We have not the law of entail, which holds the house and the estate in the same line from one generation to another. The chances are that the best house will change owners within one generation, and that most houses will change owners many times. Comparatively few sons are satisfied to live in the house where their childhood was passed, even if it be refitted with all the modern improvements; or if they have filial piety enough to stay there, their wives will be rebellious. "A new home" is a genuine American phrase, and the emigrant goes to find a new one. Preaching will not stop this tendency to find new homes; the best counsel is to make the new home as nearly as possible like the old one in its style and its comfort.

How may home-life in our wayward, restless, adventurous, speculating American world best be realized? What will help to make a genuine home in all these disadvantages? We leave out of view in the answers to these questions the necessary sentiment at the basis of all domestic happiness, and do not insist that parental, filial and fraternal love are the assurance of a happy home. We will take it for granted that these exist, and ask only of the external aids which may make this love effective. For in spite of the fine verses of the poets, and the confident theories of school essays, the blessing and the reality of home depend quite as much on the adjuncts, as on the interior sentiment. Filial love, warm as it may be, can not make home out of a boarding-house, where six families, and many more lone men and women are herded together. Home is made real by "circumstances" quite as much as by love.

1. The first need of home life, is that the head of the family own his house. This is not a rigid rule, certainly. If he can lease it for ninety-nine years, or even for fifty years, he may feel as free in the house as if he had paid the money and secured the fee, and registered the deed. But the sense of ownership in some kind he ought to have. All homes that are in hired houses are imperfect. They may imitate the genuine home, and perhaps for a time do as well, just as stucco imitates stone, and graining imitates the lines of costly wood, but they lack the first element of a good home, the sense of freedom, stability, and security. A man and his family feel more at home in a house with only

three rooms, which is really their own, than in a house four times as large, which has a landlord. Perhaps this definition of home will cut off the larger part of the so-called homes in our cities, yet the definition is according to fitness. A home in a hired house can not be complete. In Heaven, where is the highest home, there is no hired house.

2. Next to ownership of the house as a requisite for the feeling of a comfortable home, is *convenient and sufficient furniture*. Home is not real, without the conveniences of home. All the appliances of domestic use that are likely to be wanted must be there. In Oriental countries, a divan around the room, and a low stool or two, are considered to be ample furniture, even for the house of a Pasha. But in our civilized life that meagre standard will not be allowed as sufficient. To be at home in a house, we must have carpets and bureaus, and bedsteads, and chairs and tables, and all the things which seem to suggest permanent residence. Even a Methodist minister, itinerant by the system of his calling, needs more than his trunk and his saddle-bags, if he is to be at home with his parishioners. Too much furniture, indeed, is a nuisance. A house crowded with apparatus loses the proper sentiment of home, and suggests rather the idea of a warehouse or a barrack. There must be room to turn around, and to "swing the cat," if one may wish. But nothing can be more dreary than the aspect of the house which is as empty of all conveniences as a country railway station, or a doctor's office, in which the chairs are strictly limited to the number of the household, and all is stiff and uncomfortable. A Yankee home can hardly be genuine without one or more rocking-chairs; and the Boston congregation who gave their minister a dozen of these when they provided their parsonage took the most natural way of domesticating him at once. One ought to feel at ease in his home, and this can not be unless there is a certain ministry to indulgence.

3. And this suggests the remark that in a true home the *whole house ought to belong to the family, and be occupied by them*. There ought to be spare chambers for the guests, and room for hospitality, but there should be no shut chambers, or shut parlors, sequestered from all domestic use. There should be no mysteries in the home, no place of oracle there. Every part of the house, from cellar to garret, should be open and known, not only lighted and ventilated, but visited too, by every member of the household. In a real home, the family always use the best part of their house, and live in the

whole of it. They go in at the front door, as well as at the back door, they go up by the wide staircase as well as by the narrow staircase, and they use the soft cushions, the damask and the velvet, as well as the cane seat and the straw matting. In a genuine house, no part or appendage of the house ought to be too good for those who are members of the family. Even the servants, if they live in the kitchen, ought to know what is in the rooms above them, and not feel that they are outlaws anywhere within the walls. In the Puritan days, there was none of that separation of the place of master and servant in the house which is now so vigorously kept. The family felt all the more at home that Sambo and Dinah with their white teeth, and their shining skin, and their ringing laugh, were in the room when the jest went round. The only remnant of that way in the custom of evangelical households is in calling the servants to attend family worship. They may be at home in the prayers of the house, though they can not be in all its joys. It is well in the home that each member should have his own retreat, his own chamber, the daughters and the sons, and the servants, but not well that there should be no feeling of common right in the house.

4. And a good home is not all within the walls of the house. The first home of the first family was not in a house at all, but in a garden. To realize the home now, there *ought to be a garden attached to it*, some space open to the sky in which green things and bright things may grow, and the family may enjoy God's sunlight together. Time may bring the home feeling even in the centre of a brick block with a sidewalk in front, and a paved area of ten feet square in the rear; yet this kind of a home will resemble the real home only as crypt resembles a church. Some kind of a garden every true home ought to have, a clear space in front or in rear or around. This ought to be the dividing bound of the family estate, and not merely a hateful and harsh wall. When you see a garden around a house, in country or in city, you instinctively imagine a family there, that it is not a hermitage, or a tenement-house, but that they own their premises and use the property together. A garden, with climbing plants, is the sign that the family are there to stay, and do not expect with quarter-day to take up their march, and seek a new habitation.

5. Every well-ordered home will have a library. Until this in some form comes into the house, it has not the right to be called more than a lodging-house, or an eating-house, however sumptuously it may be furnished. How many

books are necessary to make a library we shall not venture to say, or whether the old Puritan measure of the Bible, the dictionary, and the spelling book is to be taken as the unit, or rather Trinity in unity. Books enough to meet the ordinary need of intercourse and conversation and reference, the "standard works," enough to give the impression of culture and intelligence: home must have these, even if it has to spare some physical comforts to get them. Books in the house are a binding influence between members of the family, the means of dispersing the clouds, making raining days useful, and enlivening hours of solitude. And in a true home the library will not be "stowed away" in a closet or a dark room, but will be in the centre of the house, in the meeting-place of the family, where the young and the old together catch inspiration in its gathered hoard. In the true home the library will be the favorite "sitting-room."

6. And we are disposed to mention *instruments of music* as a proper appendage to comfortable home life. A home which never has any music in it may be neat, orderly, quiet, even in its routine, and may train its children in exemplary ways, but it lacks one of the best influences of domestic union. A piano in good tune not only leads in the music of the song of home, but it makes home sweet, even where epithets of endearment are not lavished. Heaven comes into that home more surely. Very few households are so unfortunate that every member is insensible to harmony, that there is no music in the soul of any. There will usually be some one who can bring out the angel from the chords; and if no one in the family can do this, it may be done by the stranger within the gates. We have known more than one home where the piano was only for friends in their visits; but it made the visits of friends more frequent and more welcome. Music there ought to be in every home, not only the music of a mother "singing to her clean, fat, rosy babe," which the radical Cobbett so much glorifies, but the musing of consenting voices and consenting harps. The head of the house may be a good steward, without any musical knowledge, but a true father will know more than the "two tunes," between which he can not decide, when he hears his daughter strike the keys. The best sentiment of home connects itself from infancy to age, with the voice of music.

7. And home is more fully realized, *when all the family are together*. There is a painful absurdity in talking of the pleasure of home when the children of the house are scattered, or the parents are perpetually absent. A father etc.

spends all his time in his shop, or in his club, except the hours of the night in which he sleeps, or the minutes which he gives for meals, knows nothing of the satisfaction of home. This is one of the solecisms of American life, that men of wealth lavish so much upon their houses, but are in these houses so little. The children, too, are sent away to boarding-schools, or to Europe, and three-quarters of the great house remains unoccupied. Of course, in the passage of life and the changes of fortune, it is inevitable that the family circle should be broken up. The lone widow, whose children have gone away from her as they have married and settled in life, may speak of her "home" as the place where she has lived so long, though now no one is with her there. The forms of the departed are there in her thought, and she has society in her memories. But while the children are yet in tender years and in leading-strings, home implies that they are together in the house, and are not scattered in foreign and uncongenial abodes. For a good part of every week-day, for a large part of every Sunday, the parents and children ought to be in each other's close society. It is more important for a man of business to be in his home, than to provide merely for its enlargement. The "club" is no place for one who has wife and children, it is an institution for the refuge of grim and forlorn celibates, and even for them is of doubtful value. Genuine home-life implies a hearty love for the society in the house, which will hold this as close and as long as the children are willing to

remain. Home is a place for men as much as for women, for the sons as much as for the daughters. And no one has a true home, when there is any place that he loves better to be in than his home. Even the church must be second to this.

Other suggestions about home we might offer, to allow freedom there, to take interest in the work that all are doing, and in the language of one of Mr. Hale's heroes, to "lend a hand." But these are enough to indicate the character of a home. It is our sad conviction, nevertheless, that these advices are not likely to be heeded, as they are so unlike the habit of the time and the spirit of the age. Our restless people are more and more getting away from all love for home, which is too quiet and old-fashioned. The street, with its shows and parade; public assemblies; the facilities for travel; the fever of emigration and change; are carrying us away from the old idea of family union. Our economical schemes suggest life in lodgings and in great hotels as the rational substitute for the confined family circle. Socialism in all its theories denies the simplicity of home. The programme of Mrs. Woodhull and her associates leaves home wholly out of the question. When mothers begin to denounce the tyranny of the family relation, and proclaim that its yoke must be thrown off, then home life will pass into a tradition. When infants are sent away to be nursed, home is sent out of the house.

Secret of a Wholesome Life.

BY MISS M. M. WISWELL.

LONG ago, when the world was younger and more romantic than now, there lived a certain adventurer, to whom life seemed too short for the great deeds he wished to perform. His course had been one of danger and peril, rewarded by success, but now, while the fire of youth still burned in his heart, and visions of wealth and fame to be gained were ever present to his imagination, the power of endurance that had marked his youthful days, was fast passing away. So he listened eagerly to stories told of an island far to the northwest, over blooming with flowers, and whose inhabitants were always

young. For in the midst of this island there was a fountain, whose waters possessed such wondrous virtue, that any man bowed down with age and infirmity who should bathe in them would be restored to youth. So, with part of his wealth, he fitted out a fleet, and set sail to find the fairy fountain. He touched at many beautiful islands, and bathed in many sparkling rivers, but never found his youth again. His weary voyage only added to his gray hairs, and disappointment consumed the fire in his heart, and he died. Perhaps he found the fairy fountain then. Who knows?

We may smile perhaps at this man's hopeless search for that which existed only in fable, but in our search after health, have we not, after all, a secret sympathy with him. He desired to escape weakness and infirmity, to regain strength and endurance; our desire is the same. He sought in distant countries for a miraculous fountain; we seek for the laws that govern life, that we may learn to keep them. We call him romantic, and ourselves reasonable.

But in every search after truth, there must be a season of darkness and doubt, while many false theories are being tried and tested, and finally cast aside, before the true theory is established. So we have some reason to fear, that like this poor voyager, we too shall touch at many islands and bathe in many fountains, and finally grow old and die, before the true laws which govern life have been discovered, and we have learned how to live rightly.

We know that there is great need of reform among our people generally. When we consider the general decay of vigor, and quick susceptibility to disease, which characterize the people of to-day, we are convinced that we must be living in the constant violation of the laws of health, whatever they may be. But if we search in the works of those who have given their time and attention to this subject, to find out how to correct our lives, we shall be often puzzled. All agree that we are wrong, but do not agree as to how we can become right. We are told that our manner of dress is unhealthful, that our habits in regard to sleep, exercise, and diet are wrong, that we overwork ourselves, etc. But wherein we shall change for the better, our advisers disagree. Some good authorities tell us to abstain from meat, others equally good, strongly recommend it. Some say, Avoid condiments; others say, Use them. Some say, Take as little drink as possible, never stimulating drinks; others say, They are often useful and necessary.

If we turn in our doubt and perplexity, and examine the lives and habits of those individuals and classes of men who have been most remarkable for strength and endurance, and have lived to the greatest age, we shall find here the widest diversity. In their diet and habits of life no two seem to be agreed. We shall frequently find that some things that we had settled in our own minds as being essential, have been habitually disregarded by some of these men.

Nevertheless, the truth lies somewhere. These men who have lived long and healthful lives must have kept, either consciously or unconsciously, some great fundamental law of

health, however they may have varied in their regard for the less important rules of life. May it not be possible that these matters of diet and exercise, and so forth, all belong to the lesser parts of the law, and that we are too apt to overlook the great fundamental law, which underlies the whole, and includes them, without which there can not be really good health, and in the keeping of which the lesser laws follow naturally, or may be frequently departed from without great loss?

Lest I should fail to make my meaning clear just here, let me use an illustration, which will be familiar to us all. We can all recollect times in our childhood when we made unusual efforts to be good. I remember that I used at such times to be greatly troubled by the many ways in which it was possible to do wrong, and by the multitude of rules that a good child must learn to keep. While I was doing my best to keep the rule about obedience, I found myself forgetting to be gentle, while trying specially to be gentle, I failed in regard to diligence while working away at that, I found myself growing careless in regard to truthfulness, and so on till there seemed to be no end to the rules I ought to keep in mind, but continually forgot. I said, in my despair, that I never could keep so many rules; I thought if there had been but one rule given to us, I would not have cared how hard it might be, or how long it might take, I would certainly learn to keep it.

When I grew older I found the *one* rule I had longed for, a little rule of only one word, but it contained the whole matter, and I saw, that if I could but learn to keep that perfectly, the other would keep themselves. For Love is indeed the fulfilling of the Law. Now we know, that by the living out of this one great principle many beautiful characters are developed, although there may be an almost infinite variety of opinions and practices in regard to the lesser matters of the law. And we know that there is a great variety of sects in the world, which no man can number, who differ and dispute among themselves about many matters, but all meet in the belief and practice of the one great law of Love, and so really form one brotherhood. Also we know that if any man takes up any of the lesser matters, and makes a hobby of it, that it gives to it the preëminence that belongs only to the law of Love, he develops into a one-sided character, and soon loses the respect of others as a man of good sense and judgment.

It seems to me just so with this matter of health. There must be one great principle at the foundation, which includes all the lesser

rules, or admits of great variety of opinion in the practice of them, so long as this one great law is kept. And in examining the cases of men who have lived the longest and most healthful lives, however widely they may have differed in their diet and habits, we shall find them, I think, agreeing in one particular. In some way they all succeeded in attaining to a calm and cheerful state of mind.

Sometimes, they have been born with a disposition that takes life easily, a very blessed inheritance. Sometimes, we find them among the peasant class of a people, and the secret of their quiet temper seems to be that they know they can not rise above their station, and so content themselves with the daily life as it comes, and are never fretted or chafed by disappointed ambition. Often, we find them among those born to a high station in life, where, having no petty anxieties about ways and means, their social position being secured without an effort on their own part, they quietly follow the pursuits most agreeable to their tastes and live to a peaceful old age. Sometimes, though rarely, we find this even temper and quiet mind acquired under very disadvantageous outward circumstances, by an unshaken confidence in a Supreme Being possessed of infinite power, wisdom, and love, whose tenderness notes the fall of a sparrow and numbers the hairs of our heads. So that by a strong faith in a loving special Providence, some few learn St. Paul's lesson, "In whatsoever state I am, therewith to be content."

I believe that the real secret of a healthful life is a temper quiet, cheerful, and serene. For one who possesses such a mind naturally avoids extremes, and is temperate in diet and all the habits of life. By living in the atmosphere of ease, which a quiet and contented mind always makes for itself, the constitution acquires certain elasticity which enable it to throw off the pernicious effects of some bad habit, like the daily use of a harmful article of food or stimulant. Perhaps it might not be too much to say, that the constitution even acquires a certain strength by having some evil to resist, in the same way that a man who has a daily temptation acquires by its daily resistance a moral strength that is far more valuable than the virtue of that man who is never tempted and never needs to resist.

If Love is the beginning and end of the moral law, is not Peace the Alpha and Omega of the physical law? And if we give the precedence to diet, or exercise, or cleanliness, or regularity, or any other physical virtue, do we not make the same mistake that he makes who places

faith, or temperance, or justice, or any other moral virtue before Charity?

Why is it that the state of vitality among the American people is so low that diseases, especially of the nerves, are so common, and that as a nation we are short-lived? Is it not because we are the most restless people on the face of the earth? And yet we never try to calm down this feverish restlessness, but rather encourage it. The little boys in our public schools are urged to greater diligence by being told that they may become Presidents of the United States some day. Our rich and glorious country holds in her hands so many prizes for all who will work for them, that our little children become ambitious, even before they know how to spell the word. So long as we educate them to be restless instead of quiet, and bring them up in this utter disregard of the one great fundamental law of health, can we expect that any amount of strict attention to lesser rules of diet and exercise will confer upon them this greatest of all earthly blessings?

But the age is fast, the world is in a hurry and how can we think of rest? Shall we, who, not content with pressing fire and water into our service to drive us through the world, have even called upon the lightning to carry our thoughts to distant lands in the twinkling of an eye, shall we stop now?

We will do any thing else you tell us, dress our children in flannel, if you say so, give them a dozen baths a week, put them through courses of gymnastics, feed them on Graham, and deny them meat, but how can we teach them rest, when the watchword of the age is Progress, and the motto of the world, Excelsior.

And after all, the little lamps may burn out early, all because we would not listen to the voice which said, "These things ought ye to have done, but not to have left the others undone."

A FAMILY OF SUICIDES.—At the inquest of the body of a man who committed suicide recently in St. Louis, the fact was developed that he had attempted to hang himself five months before, but was out down by his wife, and that he was the last of a family of six brothers and sisters, all of whom had died by their own hands. It would be interesting to know the condition of the parents of this family, and their mental and physical habits. Persons with proclivities to suicide should use such remedies as will help them to overcome it. They are mainly hygiene.

My Medical Advisers.

BY LYDIA M. MILLARD.

A LITTLE pet of mine became suddenly quite ill, so one warm summer day I hurried off with her to a more healthy Long Island retreat. She was the only baby on board the boat, and there were many maternal and grand-maternal hearts beating around her, while experienced maiden aunts filled up the chairs in the corners.

Alice was a pretty child, but the rose was stealing out of her cheek, the violet fading in the eye, and about the cherub mouth sharp, dark lines were fast coming. I was going away from the best of physicians, but had I been as ignorant as the Babes in the Woods, I could not have been more enlightened than I was that day on the steamboat. "That child looks as if she was goin' to die right off," said one lady, coming up to me; "but if you'll give her strong green tea six times a day, she'll surely get well. It raised our Susy right up from the grave, when she was so far gone she couldn't lift her head," and the woman went up on deck, as she said, "to see the skenerry."

"Don't mind what *she* says," said a sharp-eyed, long-nosed person at my right hand; "you'd kill that child if you giv it green tea—green tea is rank poison—it is dried on copper! Our John went off in fits, and Pop and I thought it was nothin' but the green tea Sally gave him. Pop and I and Sally had given him, faithfully, every thing every body told us to, and sure we'd cured him, if it hadn't been for the tea. *A little black tea, every hour, will keep off diarrhea, and make the teeth come straight along. It's better than doctor's stuff—doctors don't know nothin' about baby's constitushens.*"

A very prim, positive, peculiar-looking individual came and put her hand on my shoulder, and looked right into my face as she said, "You can't tell me nothin' about children. I've raised ten on 'em; I let 'em eat raw apples, and plums, and pears, day and night, skins and all, and none on 'em ever had the infantry. Only John had one or two fits." A fat Dutch woman, in the big rocking-chair in the corner, said her Dutch doctor told her to let the children eat green apples from the time they were leetle bits of things on the trees, and eat them all along until they were ripe, and they needn't be afraid of cholery or infantry. The children

never were sick, only Josh, he had colic sometimes; may be 't was 'cause he didn't get apples enough—apples were so scarce Pop didn't want him to eat 'em all, but he gave him plenty of raw turtips—she thought that might do as well. Her sister said she "hadn't tried the apples, but she gave her children 'lasses and water—plenty of it, and she let 'em eat every thing—she did from the time they were born—tators, apple-sau, pickles, and all, and they were always orderly—never too open, and never shot up." A little woman sitting just behind me on a sofa said, "I gave my Betsy Ann Winalow's Soother Serep—fourteen bottles of it. I gave it by spells, day and night, and she never cried, and never was sick, as children most allers are, teethin'. She died years after, but diarrhea didn't kill her; she had water on the brain. Pop said she must have cotched that somewhere." "Take that child," said a woman standing in front of me, and looking into the child's face; "take that child where a woman has just died, and put the hand of the corpse on your child's face—she'll get well right off, whatever the matter with her;" and she said she "was cured of neuralgia by getting a hair off a black boy's head and putting it over the spot where the pain began."

"I wish you could get some of old Moses's green salve," said another; "and you *seed's* give a grain of doctor-stuff—just rub this salve all over her, and it would cure her. I've seen it cure the diphtery, and brocheet, and airysipple. I was so miserable one night I thought I would die, and I hadn't a grain of Moses's salve in the house, but the old man harnessed up the mare and went to Ferry Pond and brought back some salve, and it sot me right up again. Next day I did a rare big washin', besides churnin' fourteen pounds of butter, and makin' a dozen pot-cheeses for market."

"I wouldn't bring up a teethin' child in the city," said another; "for nothin' in the world—you can't raise it; but if you *heins't* no other way on arth to live in, give the child every mornin' a cup of milk and a tablespoon of black pepper. Granny says, if pepper and milk won't cure nothin' else will."

"I don't believe in givin' children nothin'—said the oldest looking woman on the boat."

When their time comes they'll die anyhow—the Lord wants 'em you can't keep 'em. I've buried eleven of 'em, and I know I'm right—it did cost a right to bury 'em, too."

"Why on arth don't you take that child to Jarsey?" said an old woman in green spectacles sitting by the window, most violently fanning herself. "Jarsey is the only place where we're sure to raise 'em. They never have the cery in the Jarseys. My Sally raised seventeen on 'em in Jarsey. None on 'em died. ebb she'd lost 'em all if Pop hadn't bought place in the Jarseys for her." The old lady aghed so hard I ventured to recommend to r some olive tar. "Oliver Tar, Oliver Tar! think I've heard of him before. He's one of

your city doctors. No, I'll wait until old Moses comes along."

I thought after these individuals had all given their prescriptions, what a pity they couldn't be all boiled down in one big tea-kettle; somebody might get some real good strengthening syrup out of them. As for myself, I did follow one prescription: we bought a place in Jarsey, and Gracie's teeth came all right.

Why should all the young doctors task their brains with scientific diagnosis and prognosis, or waste their money in going to Europe, or spend their time in perambulating hospitals, when they might take a steamboat and go to Long Island and get wisdom wiser than Solomon's!

Information as to Human Longevity.

BY H. MAY LANKESTER, B. A., OXFORD.

BEFORE making inquiry, one is apt to suppose that a good deal must be known as to probable duration of human life; that there is, at any rate, statistics of some nations or kinds of which assurance companies make use. But there are statistics and statistics,* and very few of the calculations relating to the matter are of real value. Besides statistics, as observed in a previous paragraph, we have general impressions either brought home by travelers or current among a people, and bearing in their sayings, poetry, traditions, and philosophy. In addition to these classes of evidence, we have experiments and observations on individuals which are of little value. Were there post-mortem signs of yeage—not of age only—traceable, we might have a class of evidence from examination of dead bodies. There are no sufficiently definite signs

known, though Professor Rolleston's investigation of the Anglo-Saxon interments at Frilford shows how such evidence may be of use in regard to average longevity or mortality. Cases of individual longevity in any race or condition of men carry little scientific value, and none that are recorded appear to assist in the discussion of the general question as to causes, but belong to the subject of abnormal longevity, of which a few words will be said before concluding. The incompetence of travelers to bring home facts as to longevity is obvious. They can not make direct observations, or take a census of the peoples they see; hence Messrs. Wallace, Bates, Darwin, Livingstone, and others, able observers as they are, give no information of use. Even in our own colonies, where civilized men are in close contact with the barbarians of whom we desire the knowledge, no records have been obtained. Thus, in an elaborate Report by Mr. Fenton to the Government on the natives of New Zealand, published in The Statistical Society's Journal, the whole statement is quite barren of any facts relating to the longevity of the Maoris. A kind of census is given, in which all above puberty are distinguished from all below puberty, but no greater detail than this. Even less is known of the North American Indians, the writer hav-

Professor Huxley most truly observes that there are very few cases in which the admitted accuracy of mathematical processes is allowed to throw a wholly inadmissible appearance of authority over the results obtained by them. Mathematics may be compared to a mill of exquisite workmanship, which grinds you stuff of any degree of fineness; but, nevertheless, what you get out depends on what you put in; and as the grandest mill in the world will not extract wheat-flour from peascod, so a set of formulae will not get a definite result out of bad data."

ing consulted many authorities and races. Even in China, so highly organized and civilized, nothing definite can be ascertained statistically. That acute and accomplished man, Sir John Bowring, says, "I have no means of obtaining any satisfactory tables to show the proportion which different ages bear to one another in China, or the average mortality at different periods of human life. Of the native population of British India, thoroughly permeated as it is by European administration, nothing is *known* relating to longevity. Englishmen who have been residents are of opinion that the natives of all classes have a much less potential longevity than Europeans, being very old at 60.* Mr. Hendriks states that the assurance companies will not take native lives at all, there being a general impression that they are bad, and a certainty that the natives lie so determinedly that no proper tables can possibly be framed.† From many places we have such loose and valueless statements as the following, which relates to Nova Scotia, and is the only one that need be quoted: 'Its inhabitants often live to extreme age, many attaining 90, and even 100 years,' a statement that could be made with equal truth and equal futility of any area within the limits of civilization.

There are some definite statements in poetic and other authors, which are of more value as reflecting the common judgment of a place, people, or time, on this question. Thus the Psalmist and the writer in Genesis give authoritative statements so far as their day and nationality; while Shakespeare's, Flourens's, Cabanis's, the Chinese, and other divisions of the term of life indicate the writer's estimation of that period for man as he knew him.

Returning to the matter of statistics, we find that there are few countries which have kept returns, or in which the shifting nature of the population has allowed the necessary facts to be readily acquired, even among the most civilized; and what we notice very conspicuously is that the statistics have been utterly misinterpreted, and made to furnish conclusions by

faulty logic. The Northampton life-table of Price is a remarkable instance of this. And we may point to the discrepancies in some of the life-tables appended, when treating of the same classes, as further examples. It is indeed only within the last twenty years that really sound conclusions as regards longevity have been deduced from the statistics of populations. In Sweden, England,* Belgium, Holland, and Bavaria alone are there statistics which are of sufficient value to quote. France has no sufficient returns (though the old tables, now considered untrustworthy, are given herewith), nor America nor other European states. Statisticians are liable to error when relating, above all things, to old age; since, as men get old they lose their memory, or gain a superstitious reverence from others, which induces them to lengthen their reputed age, or to allow others to do so for them. The Russian census, in which so many persons are returned as over 150 years of age, is worthless in this regard on account of the ignorance and superstition of the lower classes;† while the interesting comparisons which might fairly be anticipated from facts as to the negroes and whites in the United States are similarly rendered quite useless and untrustworthy. Thus the average age of those dying above 20 at Charleston appears as 47·7 for whites, and 52·56 for blacks. (Wynn, *loc. cit.*) Leaving out of the question all other interfering causes as to shifting of population, the greater age of the blacks is quite probably due to their inventive and imaginative talents.

Americans tell us that the number of negroes reputed to have been "servant to George Washington" is something extraordinary. It is clear that numerous advantages, in the shape of diminished labor, are to be obtained by pleading old age, or greater price than he would otherwise realize may have been gained by the slave-dealer by passing off a youth as a mature man.

The Swedish life-table, constructed from the longest and most various returns, is considered the best and truest, while great value is also attached to the English and Belgian life-tables.

* It appears from the writer's special inquiries that the medical army officers are of this opinion. Dr. Lawson has prepared a report for the Government on the mortality of natives and whites of the West African coast, but he can give no information as to longevity, except from general impression.

† A writer in The Statistical Society's Journal states that women, as a rule, have an advantage in their dealings with assurance societies, which he attributes to their deceit, since they conceal diseases from the physicians, and are guided by the anticipation of coming disease to insure!

* There are no facts as to Ireland. Mr. Hendriks, in a letter to the writer, states that he believes they are not such good lives, *prima facie*, as English lives. Bacon, on the other hand, relates wonderful things of the "*Hiberni sylvestres*," who are, he says, very long-lived; and he mentions, among other customs, their frequent use of saffron as a draught. Irishmen have abandoned this potion and taken to others—and are not now so celebrated for long life.

† According to the Russian census, the age of 100 is reached by nine persons out of every 10,000 that is born—that is, by nearly 1 in 1,000. This is known to be absurd.

STUDIES IN HYGIENE.

HEALTH AND LONG LIFE.—

Couldst thou have health, and length of life,
 These rules obey: *Be wise
 that you eat, chew well,
 and sleep, and bathe, and exercise.*—*Houghton.*

WATER.—We can not be too careful of the purity and healthfulness of the water we drink. The most dangerous is that containing animal or fecal matter in suspension. Never use discolored water. Those who live in rooms where the water is bad should use more fruit, and the juices of fruit, to supply the fluid of the system, and take no more water than they can help. The diseases caused by bad water are,

1. **Dyspepsia.** Hard water is likely to produce this disease. Who does not know that we get into a bad way by drinking hard water, and have a rough coat, constipation, loss of appetite, and dyspepsia. Custom partly removes these effects, but not entirely.

2. **Diarrhea.** Hard water may not produce this disease, but water containing animal, mineral, or vegetable matter in it very often does.

3. **Dysentery** is thought to be produced by impure water, quite as frequently as by any other cause.

4. **Malarial diseases** may be produced by drinking water from marshes.

5. **Typhoid fever** often results from using filthy water. Always avoid all such.

6. **Cholera poison** has been carried into water, and produced it when used for drink.

7. **Water impregnated with sulphurous acid** does injury to the bones, and if to them, why not to the other tissues?

8. **Calculi** is believed by many writers to result from the use of water in limestone districts.

9. **Goitre** is thought to result from the use of water containing certain minerals, as lime and magnesia.

10. **Tape-worm** and other internal animals may be taken in our drink, as well as in our food.

11. **Lead, zinc, copper,** and other metals dissolved in water, are often the cause of poisoning. We repeat again, secure good water for family use.

SODA WATER.—A subscriber asks if soda water, now so generally popular everywhere, is wholesome. We answer, Yes, and No, according to circumstances. Yes, if made as it ought to be; No, if made as too often it is. For the information of our readers, we will explain: Soda water contains no soda. The effervescence is caused by carbonic acid water, and that gas is generated by means of the action of sulphuric acid on marble. The carbonic acid set loose by this chemical action is not unwholesome in the drink. The syrups which are used to flavor the drink, if made from fruits, as it is claimed that they are by most dispensers, are wholesome, and very pleasant to the taste, but when made, as too often, and in a majority of cases, they are, from organic or other acids, they are not wholesome. Pure strawberry syrup, for instance, is delicious, but when made from nitric ether, glycerine, much alcohol, and the different forms of amyl, we decline to commend it; other fruit syrups are made in much the same way. We wish that the public would demand a choice fruit syrup for their drinks. It would make a market for fruits, and thus help the horticulturist; whereas now the chemist is the principal gainer. A glass of so-called soda water costs about one cent, and sells for ten. For this profit, dispensers can afford to make a choice article.

NONSENSE.—"White and sweet potatoes are poor food for brain and muscle; but, when eaten with the skin on make enamel for the teeth." So says a medical exchange, to which we add, Nonsense.

HYGIENE FOR THE SABBATH—THE SABBATH A DAY OF GLUTTONY.—A great many really pious people, who affirm that they desire above all things to keep the Sabbath holy unto the Lord, make of it a day of downright gluttony. But they are not aware of that fact; and if it be suggested to them, they would feel shocked by such a gross insult. The more I see of the manner in which the great mass of people spend their Sabbaths, the more I am convinced of the truthfulness of this assertion. But that is not the worst of this evil. By making of this holy day a season of gluttony, people unfit themselves for the elevating pleasures, profitable meditation, and spiritual improvement for which this sacred day was designed; and, instead of rendering it a day to rejuvenate their over-taxed and exhausted energies, they make it a means of depriving themselves of a world of exquisite pleasure and enjoyment, and of materially shortening their days.

I know this to be true from my own personal experience, which will coincide perfectly with the experience of thousands of good people, who have made themselves familiar with their peculiar feelings on this sacred day of rest. I believe that multitudes of people have come to an untimely end, in consequence of their unmitigated gluttony on the Sabbath-day.

Let us look into the truthfulness of these assertions. When I was accustomed to spend six days of the week in severe manual labor on the farm, I almost invariably felt less inclined to perform my accustomed duties on Monday than on any other day of the seven. Work almost always went much harder on Monday than on any other day. This is the universal complaint the world over. The laboring classes, especially, complain sorely of feeling so fatigued and weary on Monday that they are scarcely able to summon sufficient ambition to engage in light work. If the Sabbath were spent as it should be they would feel refreshed.

Now for the cause, which is no other than wicked gluttony! After laboring hard all the week, I was wont to look forward to the Sabbath as a day of rest. When the sacred day arrived, I thought, as multitudes of people now continue to think, that I must take my accustomed allowance of food, for the purpose of repairing the exhausted energies of the body. It is a fact, that most people of all classes, especially in populous cities and villages, make preparations for eating and drinking more on Sunday, than on any other day. A great many men, whose duties detain them from the bosom of their families every day but Sunday, always

calculate to have a kind of weekly festival on the Sabbath, as they then dine with those they love.

Poor men who have toiled so laboriously all the week, feel as if it is proper and right that they should eat and drink, and enjoy the good of their labor, and let their souls delight in fatness. Consequently, a very liberal supply of good things is provided; and all the satisfaction that the Sabbath of the Lord brings to them is the momentary gratification that one feels while partaking of a frugal meal, fragrant, smoking, and warm. The regular habits are broken up by the peculiar management of secular affairs, with reference to the Sabbath. More labor is frequently accomplished on Saturday, and the entire household are trained to labor two hours longer on Saturday night, than on any other evening; because, the next day is "a day of rest;" and they can rest two hours longer than usual in the morning; and thus swindle the Sabbath out of two hours. I have known more than one professing Christian so plan his domestic affairs, that on Saturday toward evening they would go to market, or on errands, which would require all the time till nearly midnight, before they could return; and then make up the time that they usually spend in bed on Sabbath morning. I am sorry to record that a great many profoundly excellent Christians are accustomed to do this.

The result is, breakfast is two hours later than usual; the appetite is unusually sharp; a bountiful supply of good things is delicious to the taste; the usual exercise is not taken to work off a heavy meal; every vein in the body is distended with blood; an almost unendurable plethora, or fullness follows; dullness and a feeling of indisposition comes on; and the poor soul feels that hard toil is wearing him out. Therefore, he crams down more nourishing food, to repair the waste of the body, when the whole system is already so gorged with nourishment which the body did not need, that the mind is utterly unfitted for reading, hearing, singing, or meditation. All the available energies of the stomach and the body are employed to dispose of the unnecessary supply of rich food. All these things operating together, render one drowsy and sluggish, and very much indisposed to do any thing but to lie down to rest. It took me over forty years to learn that I was making my Sabbaths a day of gluttony. When I myself, and others, thought I was living abstemiously; and did not really take nourishing food in sufficient quantities to supply the waste of the body.—*Sereno Edwards Todd.*

to Dear Sir

water? Neither of these questions admit of a definite answer, but the endeavor to answer them suggests a third: If the claim of our profession to philanthropy be well founded, would it not be well to reserve a few tears for the victims of intemperance, and not exhaust the supply over a few individuals who are supposed to endanger their health by drinking water?—*Pacific Medical Journal*.

TAKING COLD IN SUMMER.—After the variable weather of the past, we may now expect a warm term. It seems almost impossible that during such weather people should be so subject to colds; but the fact is, people are too careless. When extremely warm and in a full state of perspiration, such as follows active exercise of any kind, it is very injudicious to sit in a draught of air, with less clothing than was worn during the exercise. It is quite natural, if we have been walking on the street, to remove as much of our clothing as possible on entering the house, and further, to sit in the most breezy place we can find. If it be toward evening when the air is inclined to dampness, and the vitality of the system greatly reduced, more or less of the symptoms characterizing what are denominated colds are likely to ensue.

Therefore, never be in too great a hurry to check perspiration, either in cool air or by drinking, especially of ice-cold water. Allow a little time to elapse before removing any of the clothing, and rather let the perspiration subside gradually; for in this way we are sure of avoiding many of the serious consequences attending the other course. This may seem a foolish precaution to many, especially during such warm weather, but an observance of the precept will save many from hours of pain.—*Med. Ind.*

POISONOUS WALL PAPER.—Several instances of this latter result have recently come to my knowledge. In two families of the highest respectability in this city, illness of an unusual and protracted character existed, and at the suggestion of the physician, portions of the green wall paper of the dwelling were submitted to me for analysis. The pigments were found to consist mainly of arseniate of copper, and upon the removal of the papers the illness disappeared. In experimenting with apparently the most suitable apparatus, and employing delicate chemical tests, in rooms the walls of which were covered with these arsenical papers, no evidence of the presence of the poison in the atmosphere has been afforded; and this corresponds with the results of all similar experiments

made in this country and in Europe, so far as my knowledge extends. We must conclude that agents not recognizable by chemical tests are capable of disturbing vital processes. The evidence is very clear that in instances of illness confined to one or two members of a household, the cause may be due to some accidental disturbance with which all are equally brought in contact, but which has the power of injuriously influencing only a part. It is also clear that these sources of disease are of such a character as easily to escape detection, and therefore any facts or experience which may serve as guides to their discovery, are worthy of record.—*Boston Journal of Chemistry*.

AMOUNT OF SLEEP.—Those who think most require the most sleep. The time "saved" from necessary sleep is infallibly destructive to mind, body, and estate. Give yourself, your children, your servants, give all that are under you, the fullest amount of sleep they will take, by compelling them to go to bed at some regular, early hour, and to rise in the morning the moment they wake; and within a fortnight, Nature, with almost the regularity of the rising sun, will unloose the bonds of sleep the moment enough repose has been secured for the wants of the system. This is the only safe and efficient rule; and as to the question how much sleep any one requires, each must be a rule for himself—great Nature will never fail to write it out to the observer under the regulation just given.—*Scientific American*.

THE REPLANTING OF TEETH.—The *Pacific Medical Journal* says: "Dentists are now testing a plan proposed by Mr. Coleman, an English dentist, as follows: Extract the tooth, clear away caries and the contents of pulp cavities and canals, wash out with carbolic acid, fill the canals with cotton dipped in carbolic acid, fill the cavity, scrape off all diseased periosteum and cementum, leaving the healthy portions of the mucous membrane attached to the neck of the tooth; bathe alveolus and the tooth in a solution of carbolic acid, and return the tooth to its socket. Out of fourteen cases Mr. Coleman succeeded with nine; operating on bicuspsids and molars.

SMALL-POX MORTALITY.—The recent epidemic of small-pox in England has shown a great mortality among the vaccinated, so great that the confidence of the protective power of vaccination has been very much shaken.—*British Medical Journal*.

RECIPES FOR WHOLESOME COOKING.

VEGETABLES--Continued.

No. 7. ASPARAGUS.—Cut off as much of the stalk as will leave the asparagus five or six inches long, scrape the remaining white part very clean, and as they are done, put them into fresh water; tie them in small even bundles; put them into boiling water and let them boil till tender, but not soft; take them out with a slice into a sieve to drain, and place the asparagus neatly upon a thin toast previously dipped in the water and then laid on a dish, and serve immediately with butter sauce.

No. 8. CAULIFLOWERS.—Cut off the stalks and lay the cauliflowers in salt and water for an hour; put them into a pan of boiling water with salt, and boil them till the stalks are tender; take them out instantly; drain in a colander, and serve with butter sauce. Cauliflowers should be boiled quickly for five minutes, and then moderately, in order to prevent the flower becoming done before the stalk. Broccoli is boiled in the same way.

No. 9. BOILED VEGETABLE MARROW.—The marrows used for boiling should be rather small. Put them in a pan of boiling water; add some salt and a small piece of soda; boil till tender; cut them in slices, and serve with butter sauce.

No. 10. BAKED VEGETABLE MARROW WITH ONIONS AND SAGE.—Pare and cut in two a good-sized marrow; scrape out the seeds and fibers; rub the marrow over, inside and out, with a little salt; let it drain an hour; fill up the halves with onions, previously boiled a little, and chopped with some sage; add a little butter and salt; close them, and tie together with a little twine; butter a dish and bake in a moderately hot oven; if not nicely browned, dredge it with a little flour, brown it in a Dutch or American oven before the fire, and serve with brown sauce.

No. 11. RICE.—Pick, and wash in warm water, a pound of the best rice; set it on the fire with two quarts of boiling water, and a small tea-spoonful of salt; boil it fifteen minutes, and drain it in a sieve immediately. Butter a pan; put in the rice, place the lid on tightly; set it on a trivet in a moderate oven, till the rice is perfectly tender, and serve in a vegetable dish. Every grain will be separate and quite white.

PUDDINGS.

In the preparation of Puddings it is essential to have all the ingredients perfectly good of their kind. If there be any doubt of the freshness of eggs, they should always be broken separately in a cup, to prevent any being needlessly wasted, as one bad egg would render all the rest with which it was mixed useless. Batter puddings, when mixed, should be passed through a tin strainer, or coarse sieve. Eggs, when used for other puddings, should be strained after they are beaten. The basins, or molds, in which puddings are to be boiled,

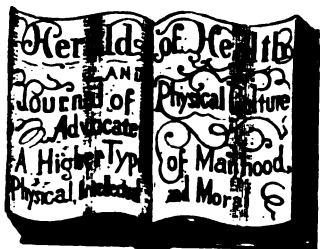
should be buttered; the pudding then poured in, and after having a cloth tied tightly over it, be put into the pan immediately. When a cloth only is used, it should be dipped in hot water and, when squeezed dry, be spread over a basin and dredged with flour; the pudding should then be poured in, and if batter, be tied closely; but if bread, it is requisite to allow a little more room. The water should boil quickly when the pudding is put in, and kept constantly boiling the whole time. When the pudding is taken out of the pan, it should immediately be dipped in cold water; this will chill the outside, and allow the cloth to be removed without injuring the surface. The most convenient way to dish a pudding is to place it with a cloth in a basin; then open the cloth, and lay the face of the dish upon the pudding, turn the whole over, take off the basin, and remove the cloth. All puddings should be boiled in plenty of water, so as to allow them sufficient room to move freely, and prevent the ingredients separating. When a pudding is boiled in a cloth, a plate should be placed at the bottom of the pan, but when a basin or mold is used, this precaution is not requisite. The cloths used for puddings should be of tolerably fine linen; they should always be carefully washed after being used, and be perfectly dry when put away.

No. 1. APPLE PUDDING.—Pare and cut some good baking apples as for a pie; put them into a saucepan with very little water; cover the pan, and set it on a moderate fire, turning it occasionally that the apples may soften regularly; when about half done drain the water from them, put them in a basin to cool, and stir in a little sugar; line a quart basin with paste, put in the apples, cover with paste, tie a cloth closely over, and let it boil an hour. Any other fruit pudding may be made in the same way.

No. 2. BAKED APPLE PUDDING.—Pare and core one pound and a half of apples; half pound of butter; five eggs; six ounces of sugar; one lemon, and two table-spoonfuls of grated bread, or biscuit. Boil the apples with two table-spoonfuls of water in the pan, on a slow fire, turning it occasionally, till the apples are soft; stir in the butter, sugar, juice and grated rind of the lemon; when nearly cold, add the bread, or biscuit, and the eggs, well beaten; bake it in puff paste, and serve it with sifted sugar over it.

No. 3. ARROWROOT PUDDING.—Two ounces of arrowroot; one pint of milk; three eggs; three ounces of sugar, and the grated rind of a small lemon, or a few drops of almond-flavor. Set three-fourths of a pint of the milk on the fire; mix the one-fourth pint of cold milk with the arrowroot till quite smooth; then pour in the hot milk, stirring it quickly, adding the sugar and lemon-peel, or almond-flavor; when cool, add the eggs, well beaten; butter a dish, and bake in a moderate oven.

EDITORIAL DEPARTMENT.



NEW YORK, AUGUST, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as indorsers of every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing by so doing this magazine will prove to be more useful acceptable to its patrons.

Exchanges are at liberty to copy from this magazine giving due credit to THE HERALD OF HEALTH AND PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

WILLIAM HOWITT'S HABITS OF LIFE.—

present this month the following very interesting letter from William Howitt, the well-known and distinguished English author, which not fail to be read with great satisfaction. These days when so many thousands of promising young men throw their lives away, the names from such men as those of Bryant, Pierpont, Cleveland, William Howitt, and others who have already published in THE HERALD OF HEALTH, can not fail to produce a wholesome effect.

ROME, 41 VIA DI PORTA PINCIANA, }
May 20, 1871.

M. L. HOLBROOK—My Dear Sir: I am in receipt of your letter of April 27, which my

elder daughter, Mrs. Alfred Watts, the author of the "Art Student in Munich," has forwarded me from London. I have read with very great pleasure the letter of Mr. Bryant, the poet, as given in your journal, and I congratulate you on obtaining the conclusive evidence of so distinguished a man; and also, in having established such a journal as THE HERALD OF HEALTH, for no subject in this fast-living and fast-thinking age is of more importance than that of laying the foundations of a sound constitution in youth, and of preserving that constitution through life by attention to the laws and dictates of Nature. This is an indispensable care, if we mean to pass our time here in comfort and in the full vigor of our intellects, and, I may add, of healthy moral sentiments.

I shall, therefore, jot down with much satisfaction such circumstances and habits of my life as I believe to have mainly contributed to these results. And, in the first place, let me observe that while the modes of my own life and those of Mr. Bryant very much accord, in a few particulars they differ, as, I suppose, must be the case in almost any two individuals. Mr. Bryant never takes coffee or tea. I regularly take both, find the greatest refreshment in both, and never experienced any deleterious effects from either, except in one instance, when, by mistake, I took a cup of tea strong enough for ten men. On the contrary, tea is to me a wonderful refresher and reviver. After long-continued exertion, as in the great pedestrian journeys that I formerly made, tea would always, in a manner almost miraculous, banish all my fatigue, and diffuse through my whole frame comfort and exhilaration, without any subsequent evil effect.

I am quite well aware that this is not the experience of many others, my wife among the number, on whose nervous system tea acts mischievously, producing inordinate wakefulness, and its continued use, indigestion. But this is

one of the things that people should learn, and act upon, namely, to take such things as suit them, and avoid such as do not. It is said that Mithridates could live and flourish on poisons, and if it be true that tea or coffee is a poison, so do most of us. William Hutton, the shrewd and humorous author of the histories of Birmingham and Derby, and also of a life of himself, scarcely inferior to that of Franklin in lessons of life-wisdom, said that he had been told that coffee was a slow poison, and, he added, that he had found it very slow, for he had drunk it more than sixty years without any ill effect. My experience of it has been the same.

Mr. Bryant also has recourse to the use of dumb-bells, and other gymnastic appliances. For my part, I find no artificial practices necessary, for the maintenance of health and a vigorous circulation of the blood. My only gymnastics have been those of Nature—walking, riding, working in field and garden, bathing, swimming, etc. In some of those practices, or in the amount of their use, Nature, in my later years, has dictated an abatement. In Mr. Bryant's abhorrence of tobacco, I fully sympathize. That is a poisoner, a stupefier, a traitor to the nervous system, and, consequently, to energy and the spirit of enterprise, which I renounced once and for ever before I reached my twentieth year.

The main causes of the vigor of my constitution and the retention of sound health, comfort, and activity to within three years of eighty, I shall point out as I proceed. First and foremost, it was my good fortune to derive my existence from parents descended on both sides from a vigorous stock, and of great longevity. I remember my great-grandmother, an old lady of nearly ninety; my grandmother of nearly as great an age. My mother lived to eighty-five, and my father to the same age. They were both of them temperate in their habits, living a fresh and healthy country life, and in enjoyment of that tranquillity of mind which is conferred by a spirit of genuine piety, and which confers, in return, health and strength.

The great destroyers of life are not labor and

exertion, either physical or intellectual, but care, misery, crime, and dissipation. My wife derived from her parentage similar advantages, and all the habits of our lives, both before and since our marriage, have been of a similar character. By-the-by, though this has nothing to do with health, I may remark that your correspondent says my wife dresses like a Friend. It is a mistake. She dresses as any other lady of her years who is simple and unostentatious in her taste.

My boyhood and youth were, for the most part, spent in the country; and all country objects, sports, and labors, horse-racing and hunting excepted, have had a never-failing charm for me. As a boy, I ranged the country far and wide in curious quest and study of all the wild creatures of the woods and fields, in great delight in birds and their nests, climbing the loftiest trees, rocks and buildings in pursuit of them. In fact, the life described in the "Boy's Country Book," was my own life. No hours were too early for me, and in the bright, sunny fields in the early mornings, amid dews and odor of flowers, I breathed that pure air which gave life-long tone to my lungs that I still reap the benefit of. All those daily habits of climbing, running, and working developed my frame to perfection, and gave a vigor to nerve and muscle that have stood well the wear and tear of existence. My brain was not dwarfed by excessive study in early boyhood, as is too much the case with children of to-day. Nature says as plainly as she can speak, that the infancy of all creatures is sacred to play, to physical action, and the joyousness of mind that give life to every organ of the system. Lambs, kittens, kids, foals, even young pigs and donkeys, all teach the great lesson of Nature, that to have a body healthy and strong, the prompt and efficient vehicle of the mind, we must not interfere on her ordinations by our study and cramped sedentariness in life's tender years. We must not throw away or misappropriate her gifts destined to the corporeal architecture of man by tasks that belong properly to an after-time. There is no mistake so fatal to the proper development of man and woman, as to place

the immature brain, and on the yet unfinished fabric of the human body, a weight of premature and, therefore, unnatural study. In most of those cases where Nature has intended to produce a first-class intellect, she has guarded her embryo genius by a stubborn slowness of development. Moderate study and plenty of play and exercise in early youth are the true requisites for a noble growth of intellectual powers in man, and for its continuance to old age.

My youth, as my boyhood, was spent in the country, and in the active exercise of its sports and labors. I was fond of shooting, fishing, riding, and walking, often making long expeditions on foot for botanical or other purposes. Bathing and swimming I continued each year till the frost was in the ground and the ice fringed the banks of the river. As my father farmed his own land, I delighted in all the occupations of the field, mowing and reaping with the men through the harvest, looking after sheep and lambs, and finding never-ceasing pleasure in the cultivation of the garden.

When our literary engagements drew us to London, we carefully avoided living in the great Babel, but took up our residence in one of its healthy suburbs, and, on the introduction of railways, removed to what was actual country. A very little time showed us the exhausting and unwholesome nature of city life. Late hours, heavy dinners, the indulgence of what are called jovial hours, and crowded parties, would soon have sent us whither they have sent so many of our literary contemporaries, long, long ago. After an evening spent in one of the crowded parties of London, I have always found myself literally poisoned. My whole nervous system has been distressed and vitiated. I have been miserable and incapable the next day of intellectual labor. Nor is there any mystery about this matter. To pass some four or five hours in a town, itself badly ventilated, amid a throng of people just come from dinner, loaded with a medley of viands, and reeking with the fumes of hot wines—no few of them, probably, of very moral habits, was simply undergoing a process

of asphyxia. The air was speedily decomposed by so many lungs. Its ozone and oxygen were rapidly absorbed, and in return the atmosphere was loaded with carbonic acid, carbon, nitrogen, and other effluvia, from the lungs and pores of the dense and heated company; this mischievous matter being much increased from the products of the combustion of numerous lamps, candles, and gas-jets.

The same effect was uniformly produced on me by evenings passed in theatres, or crowded concert or lecture rooms. These facts are now well understood by those who have studied the causes of health and disease in modern society; and I am assured by medical men that no source of consumption is so great as that occasioned by the breathing of these lethal atmospheres of fashionable parties, fashionable theatres, and concert and lecture halls; and then returning home at midnight by an abrupt plunge from their heat into damp and cold. People have said to me, "Oh! it is merely the effect of the unusual late hour that you have felt!" But, though late hours, either in writing or society, have not been my habit, when circumstances of literary pressure have compelled me occasionally to work late, I have never felt any such effects. I could rise the next day a little later, perfectly refreshed and full of spirit for my work.

Another cause to which I attribute my extraordinary degree of health, has been not merely continued country exercise in walking and gardening, but, now and then, making a clean breach and change of my location and mode of life. Travel is one of the great invigorators of the system, both physically and intellectually. When I have found a morbid condition stealing over me, I have at once started off on a pedestrian or other journey. The change of place, scene, atmosphere, of all the objects occupying the daily attention, has at once put to flight the enemy. It has vanished as by a spell. There is nothing like a throwing off the harness and giving mind and body a holiday—a treat to all sorts of new objects. Once, a wretched, nervous feeling grew upon me; I flung it off by mounting a stage-coach, and then taking a walk from

the Land's End, in Cornwall, to the north of Devon. It was gone for ever! Another time the "jolly" late dinners and blithely-circulating decanter, with literary men that I found it almost impossible to avoid altogether without cutting very valuable connections, gave me a dreadful dyspepsia. I became livingly sensible of the agonies of Prometheus with the daily vulture gnawing at his vitals. At once I started with all my family for a year's sojourn in Germany, which, in fact, proved three years. But the fiend had left me the very first day. The moment I quitted the British shore, the tormentor quitted me. I suppose he preferred staying behind, where he was aware of so many promising subjects of his diabolical art. New diet, new and early hours, and all the novelties of foreign life, made his approach to me impossible. I have known him no more, during these now thirty years.

Eighteen years ago I made the circumnavigation of the globe, going out to Australia by the Cape of Good Hope, and returning by Cape Horn. This, including two years of wandering in the woods and wilds of Australia, evidently gave a new accession of vital stamina to my frame. It is said that the climate of Australia makes young men old, and old men young. I do not believe the first part of the proverb, but I am quite certain that there is a great deal in the second part of it. During those two years I chiefly lived in a tent, and led a quiet, free, and pleasant life in the open forests and wild country, continually shifting our scene, as we took the fancy, now encamping in some valley among the mountains, now by some pleasant lake or river. In fact, pic-nicing from day to day, and month to month, watching, I and my two sons, with ever new interest, all the varied life of beast, bird, and insect, and the equally varied world of trees, shrubs, and flowers. My mind was lying fallow, as it regarded my usual literary pursuits, but actually engaged with a thousand things of novel interest, both among men in the Gold Diggings, and among other creatures and phenomena around me. In this climate I and my little party enjoyed, on the

whole, excellent health, though we often walked or worked for days and weeks under a sun frequently, at noon, reaching from one hundred to one hundred and fifty degrees of Fahrenheit. I waded through rivers breast high, because there were no bridges, and slept occasionally under the forest trees. There, at nearly sixty years of age, I dug for gold for weeks together, and my little company discovered a fine gold field which continues one to this day. These two years of bush life, with other journeys on the Australian Continent, and in Tasmania, and the voyages out and back, gave a world of new vigor that has been serving me ever since. During the last summer in Switzerland, Mrs. Howitt and myself, at the respective ages of sixty-eight and seventy-six, climbed mountains of from three to five thousand feet above the level of the sea, and descended the same day with more ease than many a young person of the modern school could do.

As to our daily mode of life little need be said. We keep early hours, prefer to dine at noon, are always employed in "books, or work, or healthful play;" have no particular rules about eating and drinking, except the general ones of having simple and good food, and drinking little wine. We have always been Temperance people, but never pledged, being averse to thralldom of any kind, taking, both in food and drink, what seemed to do us good. At home, we drink, for the most part, water, with a glass of wine occasionally. On the Continent, we take the light wines of the country where we happen to be, with water, because they suit us; if they did not, we should eschew them. In fact, our great rule is to use what proves salutary, without regard to any theories, conceits, or speculations of hygienic economy; and in our case, this following of common sense has answered extremely well.

At the same time it is true that many eminent men, and especially eminent lawyers, who, in their early days, worked immensely hard, studied through many long nights, and caroused some of them, deeply through others, yet attained to a good old age, as Lords Eldon, Scott

Brougham, Campbell, Lyndhurst, and others. To what are we to attribute this longevity under the circumstances? No doubt to iron constitutions derived from their parentage, and then to the recuperative effect of those half-yearly flights into the Egypt of the country, which make an essential part of English life. To a thorough change of hours, habits, and atmosphere in these seasons of villeggiatura. To vigorous athletic country sports and practices, hunting, shooting, fishing, riding, boating, yachting, traversing moors and mountains after black-cock, grouse, salmon, trout, and deer. To long walks at sea-side resorts, and to that love of continental travel so strong in both your countrymen and women, and ours.

These are the *saving* causes in the lives of such men. Who knows how long they would have lived had they not inflicted on themselves, more or less, the destroying ones. There is an old story among us of two very old men being brought up on a trial where the evidence of "the oldest inhabitant" was required. The Judge asked the first who came up what had been the habits of his life. He replied, "Very regular, my lord; I have always been sober, and kept good hours. Upon which the Judge dilated in high terms of praise on the benefit of regular life. When the second old man appeared, the Judge put the same question, and received the answer, "Very regular, my lord;

have never gone to bed sober these forty years." Whereupon his lordship exclaimed, Ha! I see how it is. English men, like English oak, wet or dry, last for ever."

I am not of his lordship's opinion; but seeing the great longevity of many of our most eminent lawyers, and some of whom in early life seemed disposed to live fast rather than long, I am more than ever confirmed in my opinion of the vitalizing influences of temperance, good air, and daily activity, which, with the benefits of change and travel, can so far in after life save those whom no original force of constitution could have saved from the effects of jollity, of gigantic efforts of study in early life. For some of such hard livers, or hard brain-workers

who have escaped by the periodical resort to healthful usages, how many thousands have been "cut off in the midst of their days?"

A lady once meeting me in Highgate, where I then lived, asked me if I could recommend her a good doctor. I told her that I could recommend her three. She observed that one would be enough; but I assured her that she would find these three more economical and efficient than any individual Galen that I could think of. Their names were, "Temperance, Early Hours, and Daily Exercise." That they were the only ones that I had employed for years, or meant to employ. Soon after, a gentleman wrote to me respecting these "Three Doctors," and put them in print. Anon, they were made the subject of one of the "Ipswich Tracts;" and on a visit, a few years ago, to the Continent, I found this tract translated into French, and the title-page enriched with the name of a French physician, as the author. So much the better. If the name of the French physician can recommend "The Three Doctors" to the population of France, I am so much the more obliged.

I remain, dear sir, with sincere wishes for the prosperity of your journal, and the spread of the true principles of health and long life,

Yours, faithfully,

WILLIAM HOWITT.

HOW A MAN FEELS WHEN HE IS HIT BY LIGHTNING.—During a recent thunderstorm in Ohio, Mr. Sanford Ticknor and his hired man were crossing a field when they were struck down by a bolt of lightning from the clouds. The hired man was made insensible for twenty-four hours, when he became conscious. His only remembrance of the shock was that "suddenly the ground raised up and buried him"—at least so it seemed, but no trace of any disturbance of the earth could be found, nor any mark upon the man. Mr. Ticknor was not so badly stunned; indeed was not made unconscious at all. He describes his feelings as though he had been hit by a severe blow with a stone on the head and one foot, accompanied by

the feeling that a shower of gravel had been thrown on him. He remembers a blinding flash of light succeeded by smoke. Both have recovered.

THE SUICIDAL PROCLIVITIES OF THE FRENCH.—At the meeting of the French Academy of Sciences, recently, Dr. Decaisne read a paper on the subject of Suicide. He showed that, while at Vienna the proportion of suicides to natural deaths is one in 160, in London one in 175, and in New York one in 172, Paris shows the exorbitant figure of one in 72. He thinks the effects of the *morbus democraticus*, as the Germans call it, may be admitted *a priori*, if the state of the public mind in France since 1789 be taken into account; and he is of opinion that the horrible events which have just been witnessed in Paris will soon increase the cases of lunacy, and, therefore, of suicide. He admits that it is by the prevalence of lunacy and suicide that the moral value of a people should be judged, and that the number of voluntary deaths is proportional to that of the violent passions which excite the multitude; while, on the other hand, purity of morals and moderate ambition strengthen the organs of thought as well as those of life itself. But the chief cause of the increase of suicide in France he holds to be drunkenness. The number of cases of voluntary death attributable to that vice was 141 in 1848, whereas it rose in 1866 to the frightful figure of 471. According to many travelers there is no drunkenness in Paris, where every body drinks wine, but Dr. Decaisne who lives there probably knows much more about the habits of his countrymen than those who sojourn there for a week, or a month only, and come away with a belief that they have learned the whole lesson.

MORAL HYGIENE AND TOBACCO.—The most self-indulgent, and the most selfish of luxuries is that of tobacco. I never knew a dozen men who used tobacco, who cared any thing about whether they smelled agreeable to other people, or whether they carried themselves so

that other people were happy or not. They will foul the house, they will foul the boat, they will foul the car, unless arbitrarily restrained. They forget father and mother, wife and children, and go through life smoking, stenchful and disagreeable; and when they are expostulated with, they laugh.

The use of tobacco does not make a man a monster, it only makes him selfish, in respect to people about him. Though I consider this a most selfish and disagreeable habit, I do not look upon it as being at all equal to drinking, in its evil effects. But it is a very wasteful habit. Few young men who are beginning life can afford to smoke.—*H. W. Beecher.*

Mr. Beecher's experience is not much different from that of others. We have known a few people who were respectful of the rights of others when smoking, but they were men of rare good qualities of head and heart.

EDUCATION IN NEW YORK.—

Total expenditures	9,929,463
Amount paid for teachers' wages ...	6,501,173
Amount paid for school-houses, repairs and furniture	1,980,546
The estimated value of school-houses and sites	20,417,522
Number of children attending the public schools	1,029,955
Number of persons attending the normal schools	4,724
Total number of school-houses	11,705

The money which we cheerfully pay for the purposes of general education is well and carefully applied, and the extent to which the opportunities afforded are made use of proves how highly the people appreciate our common schools.

Common school education, valuable as it is, is not every thing. The child who knows how to read, write, and cipher, may know little of how to conduct his life so as to make the most of it.

CARPETED FLOORS.—When a carpet is taken up to be cleaned, the floor beneath it is

generally very much covered with dust. This dust is very fine and dry, and poisonous to the ungs. Before removing it, sprinkle the floor with very dilute carbolic acid, to kill any poisonous germs that may be present, and to thoroughly disinfect the floor and render it sweet.

TO PREVENT PITTING IN SMALL-POX.—

Small-pox is always more feared by the people for its effects than for its dangers. All persons have a dread of being marked by it. There have been many remedies suggested to prevent pitting—the majority of them being difficult and unpleasant in their application. Pitting rarely occurs upon places of the body excluded from air and light. Pustulation is the result of the eruption exposed to those causes. The inoculation, therefore, would seem to be to prevent the action of the air and light. I have accomplished this in several cases; not only of those of brunette, but blonde complexions; in mild, as well as in severe cases of variola and varioid, by the use of ointment made of charcoal and lard, applied freely over the surface of the face, neck, and hands—applied as soon as the disease is distinguished, and continued until all the symptoms of suppurative fever had ceased. The application allays the itching, and seems to shorten the duration of the disease, and saves the patient without a blemish; the eruption protected by the ointment not even showing signs of pustulation; the charcoal preventing the action of the light, and the lard that of the air. Of course, during its application the patient does not present a very pleasing appearance, but a temporary disfigurement is preferable to a permanent one.—*J. H. Bird, M. D., in Medical and Surgical Reporter.*

COMPRESSION OF THE FEET.—This is a common practice, that often results in distortion. When we are walking with the feet unrestrained, each foot, as it receives the weight of the body, broadens slightly, and lengthens to the extent of half an inch or more. Freedom of motion in the foot itself is thus seen to be

a natural requisite, and without it, ease, grace, and comfort in walking are out of the question. Compression by the boot or shoe not only prevents this freedom of action, but also gives rise to deformity of the feet. The sole of the boot should be as wide as, and somewhat longer than the foot, when the weight of the body is resting upon it. The upper leather requires to be soft and yielding, and not so tight as to pinch the foot down upon the sole. The toe of the boot ought to be wide, leaving the toes perfect freedom of movement. If too narrow, they are made to override each other, thus producing the ingrowing toe-nails, corns, bunions, etc. The heels should be low and broad, so as to furnish a firm support. High heels throw the feet forward toward the points of the boots, and tend to produce flattening the arch of the foot.

HYGIENE FOR THINKERS AND WORKERS.

—It is only by labor that thought can be made healthy, and only by thought that labor can be made happy.—*Ruskin.*

This sentence is full of truth. Our thinkers often get morose and worthless as guides to public opinion, because they think too much and work too little. On the other hand, workmen who work and do not think, in the end become almost idiotic. In an age like ours, there is no excuse for a working person not thinking, nor for a thinker not working.

BORROWING JOY.—The worst use that man can make of his time is to borrow trouble in any shape. It is quite bad enough to spend it in tears and despair, when it comes of its own irrepressible accord; until then let us keep our hands clear of it, and if we must borrow any thing, borrow joy and hope. He who borrows trouble breaks one of the most important laws of health; he who borrows joy, and keeps on borrowing all he can of it, till his heart is full and running over, will never be in debt for it, but will make thousands in debt to him, for his outbursts of happiness and his sunny smiles. We repeat, borrow joy.

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Meat in Summer.—Whatever may be said in regard to the use of meats generally, there is scarcely a question that the less meat eaten during hot weather the better. In the first place, the process of decomposition commences in meats the moment the animal is slaughtered, and continues without cessation, unless arrested by salting, smoking, etc., until it is entirely decomposed. In hot weather this process proceeds very rapidly. Meat just from the butcher is always tough, and it must become partly decomposed before it becomes tender and fit to eat. It is this decomposition that makes it tender, and the further this process has proceeded, the tenderer the meat. The eating of meats in this condition, especially in hot weather, poisons the blood with the products of decomposition, stimulates the system to unnatural action, increases the heat, produces a general condition of feverishness, and renders the person more liable to fevers, inflammations, and other diseases. If the meat gets a little too "tender," it is almost certain to bring on an attack of diarrhea, and many cases are caused in this way. If you value health and comfort, use meats sparingly and fruits and vegetables freely during hot weather, if at no other time.

Varicose Veins.—"For about one year I have been troubled with what the Faculty would call varicose veins, and although they do not trouble me particularly during the day, if I do not become over-heated, yet every evening, just after supper, the veins in my legs swell up and—well, you must know how it is—bother me awfully. Now, I hope you can give me an atom of advice through your valuable paper, telling what I ought to do—if any thing, and what climate and diet is advisable in my case."

A simple case like this is easily cured. A plain, healthful diet, out-door exercise, regularity of the bowels, avoidance of too long standing, and bathing the limbs in cold water once or twice a day, followed by thorough friction, rubbing, and percussion, will soon effect

a cure. A rest in the horizontal position for an hour or more in the afternoon will be found very useful. In more severe cases, compression by a bandage, or even the application of caustic may be necessary.

A Good Precedent.—A man recently died at Ironton, Ohio, of delirium tremens, and his widow brought suit against the rum-seller who had supplied her husband with liquor. The Court awarded her \$5,000 damages. If rum-sellers had to pay a fine of \$5,000 for each death caused, directly or indirectly, by the drinking of the liquors they sell, they would disappear like dew before the sun, and seek a more useful calling. May this good example be followed by the wives and widows of drunkards generally.

Baking Powders.—"Will J. Monroe Taylor's 'Cream Yeast Baking Powders' injure a dyspeptic; or would bread made without it be better?"

I consider this baking powder the best in use; still, when good, light, unleavened "gems" can be had, I think it better to dispense with the powder. Unless they can be made light and porous without, I should prefer to use it.

Adam's Apple.—"Why is it that in some persons the larynx (Adam's apple) is so prominent, while in others, who are no fleshier, it does not protrude at all?"

For the same reason that one man's nose is longer than another's. The only way to make it less prominent is to build up around it with fat.

Diet for Constipation.—"Will you be kind enough to give the writer—who suffers from constipation—through the medium of your valuable 'Answers to Correspondents,' the outline of a few 'anti-constipative' meals, and strictly hygienic? No doubt but that many of your readers would, with me, be profited thereby."

The following articles are good. Two, three, or four may be selected for each meal. It is well to vary the selection from meal to meal. Graham bread, "gems," and crackers; cracked wheat, wheat, rye, corn, or oat-meal mush; hominy, groats, apples, peaches, pears, grapes, currants, cherries, plums, strawberries, raspberries, blackberries, huckleberries, tomatoes, melons, squashes, and fresh vegetables generally.

Fetid Perspiration of the Feet.—

"I am suffering with one of the most odious of diseases, the fetid perspiration of the feet. The main feature of my case is this: Every time I have a new pair of shoes, the intense heat of my feet brings out the natural odor of the leather with such a force as to make a nuisance of myself to every one that surrounds me; but when the perspiration has penetrated the soles of the shoes, the two odors mixed together are a horrid thing to stand. I change my stockings three times a day, washing my feet each time with alum, or the compound spirits of ammonia added in the water, but meet with only a comparative success. Can science do any thing for me? If such a disease is not curable, is there any thing that would neutralize the odor of the leather and the infectious smell of perspiration? I am to-day twenty-two years old—obliged to remain single on account of that disease, and will persevere in that idea, preferring to isolate myself to being a nuisance to my husband."

This disease is owing, primarily to an impure state of the blood, consequently means should be at once taken to correct that condition. A very plain and rather abstemious diet, an abundance of out-door exercise, a Turkish or vapor bath, or wet sheet-pack two or three times a week are the main essentials. The shoes should be light and loose. Cloth shoes are best in warm, dry weather. Linen or cotton stockings should be worn, linen being preferable. The feet should be bathed in pure, cold water three or four times a day, thoroughly rubbed, and immersed for five or ten minutes in fine, dry, loamy earth.

Ice-Cream.—"How about ice-cream; if it is proper eating, what time in the day is the best to indulge?"

Ice cream being composed of sugar and milk

or cream, with some flavoring extract—it is better without eggs—is no more objectionable than the same articles in any other form, provided it be eaten slowly and allowed to melt in the mouth. It should be eaten at a regular meal time, and not in large quantities.

Antipathy to Strawberries.—"What state or condition of the stomach is indicated by its antagonism to strawberries—seemingly so wholesome a fruit, eaten moderately and at a proper season?"

Some persons are so constituted that even while in perfect health they can not eat certain articles of food which are wholly unobjectionable to persons generally; hence has arisen the saying that "what is one's meat is another's poison." There are also certain conditions of irritation and inflammation of the stomach in which it can not bear acid or sub-acid fruit.

Soap for the Hair.—"I have heard said that soap has an injurious effect on the hair, and therefore should not be used in washing the head. I use, beside the daily cold water bath, white castile soap and cold or cool water, as often as I think necessary, being careful to rinse all soap out of the hair afterward. It cleanses the scalp, and seems to have an admirable effect on the hair, making it very clean and pleasant to the touch. Will you give us your opinion on the subject?"

The continued use of soap upon the hair will cause it to become harsh and dry. If pure, soft water is not sufficient for cleanliness, occasionally use the white of an egg, well beaten up, and applied to the hair, rubbing it in thoroughly with the fingers. It is much better for the hair and scalp than soap.

Honey.—"Is honey injurious?"

Many persons can not eat it on account of the difficulty of digesting it. To those who can digest it readily, it is no more injurious than sugar. It should always be eaten sparingly, if at all.

Hard Water and Constipation.—

"Is hard water objectionable where one is troubled with constipation?"

Hard water is bad for any one, but especially so where there is costiveness of the bowels or a tendency thereto.

NOTICES OF NEW PUBLICATIONS.

ON THE PHYSIOLOGICAL EFFECTS OF SEVERE AND PROTRACTED MUSCULAR EXERCISE; with Special Reference to its Influence upon the Excretion of Nitrogen. By **AUSTIN FLINT, Jr., M. D.** New York: D. Appleton & Co.

When Edward Payson Weston, the celebrated pedestrian commenced his walking feats, he probably had no thought of what science might gain by taking notes of the effects the exercise had on his body. His great ambition was to walk one hundred miles inside of twenty-four hours, on one of the five days. Though he failed to do this on first attempting it, the doctors did not fail to measure and weigh all the food he ate for fifteen days before, five after the effort, and during the effort. Nor did they fail to estimate the results of the exercise on the excretion of nitrogen, and other elements of excretion. The results of these experiments are very interesting, and have an important bearing on the value of different kinds of food, and the source of muscular power. Price, by mail, \$1.00.

FRAGMENTS OF SCIENCE FOR UNSCIENTIFIC PEOPLE; a Series of Detached Essays, Lectures, and Reviews. By **JOHN TYNDALL, LL.D., F.R.S.** New York: D. Appleton & Co.

The Appletons are doing a good service by publishing the works of the great scientists of England for American readers. The volume before us contains about twenty different articles, in popular language, and adapted to the understanding of all who can read. Among them are, Constitution of Nature; Matter and Force; Dust and Disease; Death by Lightning; Vitality, and others no less interesting. The paper on Dust and Disease has many additions to it, and is more complete than we have seen it in other forms. We commend the work as more interesting than any novel, to those who love to know something of the secrets of Nature as described by a master interpreter. Price \$2.00.

THE EYE IN HEALTH AND DISEASE. By **B. JOY JEFFRIES, A. M., M. D.** Boston: A. Moore.

Among other chapters, we find this book treats of the following subjects: Anatomy of the Eye; Physiology of the Eye; Old Sight and Spectacles; Near-sightedness, or Myopia; Long-sightedness, or Over-sightedness—Hypermetropia; Astigmatism; Cataract in Children simulating Near-sightedness; Cataract; Artificial Eyes—How and When they are Worn; Squinting Eyes—Why and How they must be Operated on; An Artificial Pupil—What it is, How, and Why the Operation is Performed; The Ophthalmoscope—What it is, and How it is Used; Injuries and Diseases of the Lids and Eye—Their General Care and Treatment, etc. The work is well written, and will prove a valuable one to all interested in the subject on which it treats. Price \$1.50.

THE TRANSMISSION OF LIFE; Counsels on the Nature and Hygiene of the Masculine Functions. By **GEORGE NAPHETH, A. M., M. D.** Philadelphia: J. G. Fergus & Co.

This is a plain, straight-forward sensible book, of

over three hundred pages, which will do a world of good if its counsels are heeded. A large number of eminent men have written highly commendatory letters regarding it, among whom are Rev. Dr. Todd, A. D. White, President of Cornell University, and many others.

THE PARENT'S GUIDE; or, Human Development, through Inherited Tendencies. By **HENRY PRINCE-ROX.** Second edition, revised and enlarged. New York: S. R. Wells.

It is pleasant to think that the improvement of the race occupies so much of the thought of the world. Even Darwin, whose "Descent of Man" is devoted mainly to showing the origin of the race, can not close his masterly work without giving a brief half page as to the best means of improving human beings, through natural and sexual selection; and Galton, in his work on "Hereditary Genius," has a whole chapter on the same subject; but here is a book of over two hundred pages, by a woman, on the same great theme. The book is earnest, instructive and full of thought. Let every young man and young woman read it. Price \$1.50.

THE HOMOEOPATHIC DOMESTIC PRACTICE. By **JOSEPH LAURIE, M. D.** Edited and revised by **EDWARD J. McCLAREN, M. D.** First American, from Twenty-first English Edition. New York: Bernecke & Tafel.

This massive work of over one thousand pages, which has had a great sale in England, has just been republished here. It is designed to be a family guide to those who wish to give Homoeopathic remedies, without employing a physician. It seems to be ably prepared, and for the purposes intended is no doubt the most able work extant. Price \$7.00.

THE DIETETIC REFORMER AND VEGETARIAN MENSSENGER, for July. London: F. PITMAN; Manchester: Tubbs & Crook.

This little Quarterly of twenty-four pages has been published in the interests of Dietetic Reform for over ten years, and contains a great deal of valuable matter in small space. This is the first number we have seen for two years, but is as full of good things as ever; not only on the subject of reform in food, but many other matters. We will order it for any of our readers who will send us \$1.00.

OTHER WORLDS THAN OURS; The Plurality of Worlds, studied under the Light of Recent Scientific Researches. By **RICHARD A. PROCTOR, B. A., F.R.S.** New York: D. Appleton & Co.

The work before us is imbued with a fine understanding of religious feeling and reverent study. It is written with a pure diction and luminous style, easily read and understood by the unscientific reader. We apprehend there are multitudes, satiated with the fulsome romance of the day, who will find themselves refreshed by the solid thought and suggestive ideas of the writer.

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MRS. M. L. PECK

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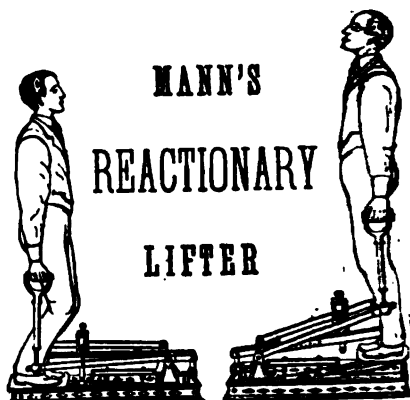
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By **M. L. HOLBROOK, M. D.**, Editor of The Herald of Health, with an Introductory Letter by

DR. DIO LEWIS. Pp. 16.

This valuable little tract will be furnished by the hundred, postpaid, to those who wish to circulate it at \$2.50. Single copies, by mail, 5 cents each; three copies to the address, 10 cents.

The New York Mail, in noticing this tract, says: "Dr. Holbrook, Editor of The Herald of Health, has served other people as well as himself by reprinting his thoroughly excellent paper on 'The Health Habits of Young Men,' which is crammed with suggestive facts and good advice." Address

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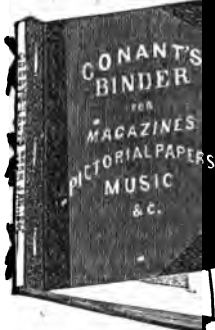
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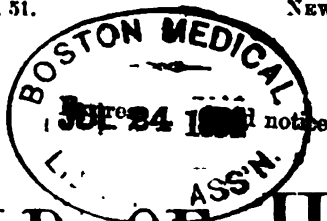
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CONTENTS FOR SEPTEMBER, 1871.

GENERAL ARTICLES:		Page	
The Wine Question— <i>Rev. J. C. Holbrook, D. D.</i>	97		Castles on the Sands (A Poem)— <i>Mrs. D. Harry Prime</i> 121
Every Tooth is worth a Diamond— <i>L. J. B. Lettens, L. D. S.</i>	102		Studies in Hygiene..... 124
Work— <i>Rev. Charles H. Brigham</i>	105		Recipes for Wholesome Cooking—Puddings..... 128
Evils of Hair-Dyes and Cosmetics— <i>Sara B. Chase, M. D.</i>	109		
Are Artificial Teeth Capable of Producing Salivation?.....	111		EDITORIAL DEPARTMENT:
The Fool and the Farrier (A Poem)— <i>Joel Benton</i>	112		How they Treat American Women Medical Students in Germany—A Letter from <i>Dr. Mary Safford</i> 129
Good Nature (A Poem).....	112		The Exerciser—Death of <i>Phoebe Cary</i> 131
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Birdsall</i>	113		
Chinese Diet— <i>G. W. Yapp</i>	117		HOW TO TREAT THE SICK:
Keep the Distaff Ready, and God will Send the Flax— <i>Frances Dana Gage</i>	118		Treatment Rheumatism by Electricity. 132
Ordinarily, Never— <i>P. H. Hayes, M. D.</i>	119		How to Cure Stammering..... 133
Statements as to the Duration of Human Life— <i>E. Ray Lancaster, B. A.</i>	122		
			ANSWERS TO CORRESPONDENTS:
			Exercise for Sedentary People—Climate for Consumptives—Night Sweats, etc. 134
			High-heeled Boots—Fever and Ague.. 135

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THE HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE.

VOL. 18, No. 3.]

NEW YORK, SEPTEMBER, 1871.

[NEW SERIES.]

PUBLISHED MONTHLY BY WOOD & HOLBROOK, 13 & 15 LAIGHT STREET.

A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

COMPRISED IN A SERIES OF TWELVE ESSAYS CONTRIBUTED BY OUR BEST THINKERS AND WRITERS.

No. XI.—THE WINE QUESTION.

BY REV. J. C. HOLBROOK, D. D.

THE relation of Wine to the Temperance Cause is a subject that has given rise to an immense amount of discussion. On the one hand it has been insisted that the Bible sanctions its use, and that if it were cheap and commonly employed as a beverage, it would expel ardent spirits and greatly diminish, if not wholly eradicate, the vice of drunkenness. On the other hand both these positions are denied, and the ground is assumed that the friends of the Temperance Reform must oppose the use of wine equally with distilled liquors, if they would hope to succeed in their designs.

Of course, it would be impossible within the limits of a single brief paper to go over the whole ground covered by the wine question. I shall, therefore, at this time confine myself mainly to the practical point, Is the use of wine calculated to diminish the amount of intemperance?

But, before proceeding to this discussion, it may be proper briefly to refer to the Biblical aspect of the subject. It must be apparent to every reader of the Scriptures that they contain

two distinct classes of passages, one of which is commendatory and the other denunciatory of wine. In the last class it is described as "a mocker," and as producing "woe, sorrow, contentions, babblings, wounds without cause, redness of eyes"—exactly the effects of ardent spirits—and warning against even "looking" upon it "when it giveth its color in the cup."

On one occasion we are told that Christ made wine at a marriage feast for the use of the company, and he used "the cup," which, it is *assumed*, contained wine, at the institution of the Lord's Supper, while elsewhere in the Bible a woe is pronounced on those who drink wine, and the law of Moses expressly forbade the use of it by the priests.

Now, either the Bible is a book very inconsistent with itself, and contradictory, even in its different parts, commending at one time what it denounces and forbids at another, or else there were two different kinds of beverages called by the same general name, and referred to in its opposing passages. And I see not how we can possibly avoid the last-named conclu-

sion, unless we give up the idea of the inspiration of the Scriptures. We can not believe that Divine Wisdom would commend and denounce the same thing.

Accordingly, it has been very conclusively shown, by several writers, that there are two substances spoken of under the term wine; one of them the pure, unfermented juice of the grape, or "fruit of the vine"—a harmless, uninebriating and exceedingly wholesome beverage, well deserving the commendation of the Almighty, and one of "the good things" of this creation. The other is a totally different article, both in its nature and effects. It is the juice of the grape, indeed, but after it has undergone a radical change by fermentation, and become alcoholic and inebriating.

Ancient writers testify that the unfermented juice of the grape was used as a beverage, and by art preserved from the chemical change that charges it with alcohol. And this it was that God commended, while the other liquid was condemned.

Now, as to our Saviour's example, *there is not a particle of evidence* that he created alcoholic or fermented wine at Cana, but all the probabilities are against it. And as to the contents of the cup at the institution of the Supper, it is *certain* that they could not have been alcoholic or fermented wine. Our Saviour and his disciples had been just celebrating the Passover, at which the Jews were forbidden to use any leaven, and he took the cup that was before him on the table and employed it in his new ordinance.

Rev. Dr. Fairfield, in an article in *The Advocate* in May, referring to this subject, says:

"But when it is asserted that 'fermented wine' is the only proper symbol, it is reasonable to call for the proof. Indeed, the term 'wine' is nowhere used in the Bible, so far as I remember, in connection with the Christian ordinance. So that even if that word implied fermentation—which it does not, as will be shown pretty soon—it would amount to nothing in this case. The terms used are 'the cup,' and 'the fruit of the vine.' And it will scarcely be maintained that unfermented wine is not as much the fruit of the vine as fermented. In fact, it might very plausibly be argued that the term 'fruit of the vine' forbids the use of fermented wine altogether. Is 'fermented wine' 'the fruit of the vine?' Then wine vinegar is also. Strictly speaking, neither of them are. Both vinous and acetous fermentation are the result of chemical agencies outside, and independent of the vine altogether.

"By reference to the institution of the Pass-

over (see Ex. xii: 3, Lev. xxiii: 5, and Numbers xxviii: 16), it will be seen that no mention is made of wine at all, either fermented or unfermented. Its use, therefore, was no part of the ordinance. Kitto, in his 'Cyclopedia of Biblical Literature' (Art. 'Passover'), says several things: 1. 'It seems probable that *water* was the general drink at the original institution, though some of the more wealthy used wine.' 2. 'The wine used would of course be *unfermented*, but it was not certain that it was the fresh expressed juice of the grape; for the Mishne states that the Jews were in the habit of using boiled wine.' 3. 'The habit of boiling the wine would be resorted to as a well-known means of destroying the fermenting principle, and securing the purity of the wine.' [Plainly implying that, in his opinion, fermentation instead of being necessary to pure wine, destroyed its purity altogether.] 4. 'Fermented wine was, in fact, excluded by a general law, which appears to have been well understood.' 'In the judgment of the ancient Jews both the letter and spirit of the law extended to the prohibition of *every thing known* to be fermented.'

"He says several other things to the same purport. I refer the reader to his entire article.

"To maintain, as some do, that nothing is properly called wine, unless it is fermented, and contains more or less alcohol, is strange enough to strike one as something 'new under the sun.' We call a certain substance 'cider' the hour it is made, a week after, when preserved from fermentation, equally as when fermented, and capable of producing intoxication. So of the term wine. This in common use, and in New Testament usage none the less. 'No man putteth new wine into old bottles' is an old illustration of the English usage, and equally of the Greek. By reference to the Greek Testament it will be seen that Matthew, Mark, and Luke agree in using the general term for wine in this case. Whether new or old, fermented or unfermented, intoxicating or unintoxicating, the same word might be used. And the writer of this article has more than once drunk wine that was several years old, and yet entirely free from alcohol—wine of which one might drink as much as of pure water, with no intoxicating effect whatever. Is it certain that the ancients did not understand the secret of so preserving their wines?

"Whether they did or not, it is certain that the pure, unfermented juice of the grape was sometimes used in the very 'best society' known to the Orientals. Of this we have an

illustration in the dream of Pharaoh's chief butler. (Gen. xl: 11.) His office was that of cup-bearer. He dreamed that he was restored to it. And in performing again the functions of it, he says: 'Pharaoh's cup was in my hand, and I took the grapes and pressed them into Pharaoh's cup, and I gave the cup into Pharaoh's hand.' This illustrates the usage of the office he held. Pharaoh drank new wine. And to make sure that poison was not in the cup—kings are always fearful of assassination—his chief butler was accustomed to press the juice out in his presence; nay, even while the king held the cup. He drank no other wine; for if he had, the poison might be put into that; and this precaution against losing his life would be rendered useless."

It is certain, then, and this is the point I have in view, in this preliminary reference to the subject, that no argument can be drawn from the Bible, in favor of the use of fermented or alcoholic wine. If one class of texts is quoted for it, the other class affords a full offset against them, if they both refer to the same beverage, and one nullifies the other, and those who plead Scripture authority for alcoholic wine-drinking must defend the consistency of the Bible as they best can. Besides, the Bible nowhere commands the use of wine as a beverage, while it does certainly contain warnings against it, and in some cases express prohibitions, and the most life-like pictures of its disastrous effects.

We come now to the main topic of this paper, Is the free and common use of alcoholic wine calculated to lessen the amount of intemperance? And this question may be considered in the light of reason alone, or in that of experience.

First, then, is it reasonable to suppose that the use of intoxicating wine will check intemperance? How can it, when the inebriating principle is in it, as really as in rum, gin, brandy, or whisky, and produces the same effects, only requiring a little more to be taken. The combination in which it is found in wine, does not change its nature or operation in the least. A given quantity of alcohol in wine produces exactly the same effects as if it were in brandy or whisky. The man who drinks fermented wine, takes alcohol into his system, and he drinks it for the sake of the effects the alcohol produces. It creates the same habit and appetite that the use of it does in any kind of ardent spirits, and all experience proves that great multitudes of those who begin the use of wine are led on to that of the more fiery potations.

The drunkard's appetite is as readily formed and cultivated by wine, as by ardent spirits of any kind. Reason then teaches the fallacy of the argument that the free and common use of wine will diminish drunkenness.

If now we turn to the consideration of *facts* and look at the question in the light of experience, we shall arrive at the same conclusion. In the first place, then, we know that intemperance was a fearfully common and destructive vice among the ancients who inhabited wine-producing countries, and who knew nothing of our modern ardent spirits, as distillation was not then practiced. The Greeks especially were famous for their drunkenness, and Plato declares that during the period of the feasts of Bacchus there could not be found a sober man or woman in all Attica, a district celebrated for its wines.

Nor is there less evidence that intemperance prevails in modern times in wine-producing countries as it did in ancient days. This has been disputed, and no doubt in some countries the poverty of the masses of the people does prevent them from indulging in the use of strong and expensive wines, and compel them to confine themselves to those which are cheap and sour and less inebriating. But the following extracts from a document relating to this subject afford conclusive proof that drunkenness is a terrible curse in those regions where wine is most accessible to the people.

"In the city of Paris in 1863, where more wine was consumed than in any other city on the globe, the consumption of distilled spirits amounted to *seven gallons* for every man, woman, and child. France produces from eight hundred millions to a billion gallons of wine in a year, and at the same time *consumes more brandy than any other nation*, in proportion to her population."

The distinguished American author, Cooper, wrote from Europe: "I came to Europe under the impression that there was more drunkenness among us than in any other country, England, perhaps, excepted. *A residence of six months in Paris changed my views entirely.* I have taken unbelievers with me into the streets, and have never failed to convince them in the course of an hour. On one occasion a party of four went out with this object. We passed *thirteen drunken men* within a walk of an hour—many of them were so far gone as to be totally unable to walk; and once I saw three men wallowing in the gutter before my window, a degree of beastly degradation I never witnessed in any other country. In passing between Paris and London, I have been more struck by drunken-

ness in the streets of the former than in those of the latter."

Pastor Fisch, the President of the Protestant Evangelical Union of France, stated in a public address, while enumerating the difficulties lying in the way of the Gospel in France, made most prominent the habit of excessive drinking, and described the prevalent intoxication among the peasantry as something fearful.

Before the Legislative License Committee of Massachusetts the following testimony was given, in March, 1867: "Professor W. F. Wesen, who resided seven years in Germany, said of the students in the Universities of Berlin and Halle, 'One-third of the students are, once a week, what you would call drunk. As regards the people, I can only say, that during the last five years drunken people have gone past my house, I suppose, every evening, sometimes boisterously drunk, and sometimes reelingly drunk.' Henry G. Carey, Esq., Professor of Music, testified that at a musical festival which he attended in Switzerland, three or four hundred musicians being present, 'a large proportion of them were drunk—a great many of them dead drunk, quite a number of them fighting drunk, and more of them reelingly drunk.' E. J. Mitchell, Esq., who resided two years in Paris, said: 'I recollect very well that the first morning after I reached Paris, after leaving my hotel the first thing which I saw was a drunken woman.' He worked in a printing-office with eight men, and 'two out of the eight were habitual drunkards. They were, on the average, drunk once a fortnight, both of them, and unable to do their business.' Rev. J. G. Cochran, missionary from Persia, said of the people where he lives in the wine-making season, 'The whole village of male adults will be habitually intoxicated for a month or six weeks.'

"Horace Greeley wrote from Paris 'that wine will intoxicate—does intoxicate; that there are confirmed drunkards in Paris, and throughout France, is notorious and undeniable. You can hardly open a French newspaper that does not contain some account of a robbery perpetrated upon some person stupefied by over-drinking; a police case growing out of a quarrel over the wine-cup; or a culprit, when asked to say why the sentence of the law should not be pronounced upon him, replying, "I was drunk when this happened, and know nothing of the matter." That journeymen are commonly less fitted for and less inclined to work on Monday than on other days of the week, is as notorious here as it ever was in any rum-drinking city.'

"A French writer, M. Le Clerc, says of

'French wines,' 'Laborers leave their work and derange their means to drink irregularly, without the walls of the town, the wine which would be taxed the moment it enters within the walls, and at a distance from their homes, transform into *drunken debauch* the time which should have been spent in profitable labor.'

"A French magazine, called *The Work-a-Day World of France*, says: 'Drunkenness is the beginning and end of life in the great French industrial centers. There are manufacturing towns (Lille, for instance,) where the women have followed the example of the men and have added drunkenness to their other vices. It is estimated that at Lille *twenty-five out of every one hundred men, and twelve out of every one hundred women* are confirmed drunkards.'

"Rev. E. S. Lacy, of San Francisco, spent several months in Switzerland, and he writes 'I have just spent six months in a country place of Switzerland, where the people do nothing but work in the vineyards; where wine is cheap and pure, and far more the beverage of the laboring classes than water; where none think of making a dinner without a bottle of wine; where all the scenery is of the most elevating and ennobling character. *Here more intoxication was obvious than any other place it was ever my lot to live in.* On holidays and festal occasions you might suppose all the male population drunk, so great are the numbers in this deranged and beastly condition. On Sunday afternoons young men go shouting along the street. Intelligent Germans inform me that this is the great social evil of their country, a place where wine, if not very cheap, is never adulterated, and where great quantities of it are drunk.'

Such is the testimony that comes to us on the question we are considering, with reference to foreign countries. Let us now inquire, what are the facts in California, the great wine-producing district of the United States. The San Francisco Daily Bulletin, one of the leading newspapers of the State, estimates the bearing grape vines in 1870 at thirty millions, and the yield in fruit at thirty thousand tons, and the wine manufactured from five to six millions of gallons, worth five millions of dollars. The product for 1871 is estimated at from ten to twelve millions of gallons. The average consumption of wine is stated to be ten gallons to every citizen. It is calculated that the product of the State will be two hundred millions of gallons!

And now what is the effect of this abundance of wine on the habits of the people? There is no State in the Union where there is so much drunkenness and crime, and where there is so

great a consumption of ardent spirits in proportion to the population. At a public meeting in one of the cities of the State an essay upon the subject of the use of wine was read, whereupon a gentleman of high standing rose and said that his observation convinced him that wine-making results in a great increase of intemperance. "I knew," said he, "a case of a man who went largely into the business, but he subsequently abandoned it because he found it was making drunkards of his whole family."

On another occasion, a clergyman of wide observation stated, in a public meeting, that he had known a large number of instances in which wine manufacturers in the State had become intemperate, with their children. The writer of this, not long ago was riding with a minister of the gospel in California, when the subject of wine-making came up in conversation, and he remarked that he had a son residing in the foot-hills who was extensively engaged in grape-growing and wine-manufacturing, and that he noticed when he visited him last that he used no other beverage whatever than wine, and he drank it by the quart; "and yet," said he, "I could drink but a glass or two of the same without feeling the intoxicating effects."

Sonoma is one of the principal grape-producing and wine-making counties in the State. After a visit to that region a few months ago, Rev. S. V. Blakelee, Traveling Editor of The Pacific, wrote to that paper as follows:

"We think the terrible injury to Sonoma is its vine-growing. It pays poorly in money, and is most ruinous to all religious and moral interests. People in the town—settled residents—told us that all those engaged a long time in making wine so drank of it themselves as to be properly boozed all the time. And as we were entering the place we met a boy, perhaps twelve years old, driving his horse with a load of grapes to the wine-press. We stopped and had quite a talk with him. In the conversation he said: 'Every body drinks wine here—men, women, and boys and girls—yes,' said he, 'and little children, too. Why, mother said that at the party last week a little girl only seven years old drank three bottles of wine in the evening.' We are fully convinced that wine is a mocker and a curse in America and to Americans."

At a State Convention in San Francisco of the friends of Temperance, the following resolution was adopted, not long ago:

"Resolved, That we consider the project of banishing intemperance from California by introducing the general use of wine as a beverage to be a delusion and a snare. Even were it

possible to exclude ardent spirits thereby, and substitute the fermented juice of the grape, there is no reason to look for any other results than followed in the ages of antiquity, when wine was the only intoxicating beverage, and when the drunkenness of wine-drinking nations provoked the wrath of God and the denunciations of Holy Writ."

In 1866 the General Congregational Association of California, at its meeting in San Francisco, took strong and decided ground on the wine question, declaring that "the manufacture and use of it are destructive of the political and religious interests of the Commonwealth."

The Rev. A. L. Stone, D. D., formerly Pastor of Park Street Church, in Boston, writing from San Francisco, and referring to the above action, said, "The Association struck a strong blow for the Temperance Cause. This was a point on which, I will confess, I had not previously a clear conviction. I had entertained a sort of hope that the manufacture of pure wines and their introduction into general use would crowd out the gross strong liquors, and diminish intemperance. *I am now convinced that this hope was groundless and delusive.* It is in evidence that full two-thirds of all the wine manufactured is converted into brandy. It also appears that in the vine-growing sections *intemperance is on the increase*, even among the youth of both sexes."

The Excelsior, a religious paper published at Syracuse, N. Y., referring to the above testimony of Dr. Stone, says: "The same is true, to our personal knowledge, in certain wine-making districts in Western New York. Some of the wine-growers began to make pure wine, which, it was promised, would be harmless. Presently they were making brandy and champagne; and now the proprietors have rubicund noses and are habitual drinkers, and the young folks are growing up a generation of wine-bibbers and drunkards."

With such facts and testimony before him, how can any reasonable person believe that the common use of fermented wine would be promotive of Temperance in this land? It is inebriating, and is used for the sake of its intoxicating effects. It forms and cultivates the habit of stimulation, and leads directly on to the use of stronger drinks. Thousands have begun with it a career of drunkenness that has ended in ruin. There is no safety to the individual but in total abstinence from *all* alcoholic beverages, and no salvation to the nation from the evils of intemperance but in the banishment from society of *all* intoxicating drinks.

Every Tooth is Worth a Diamond.

BY L. J. E. LEBLANC, L. D. S.

[NOTE.—The following paper, translated from the French, and read before the Montreal Dental Society, is one of the best on the care and hygiene of the teeth that we have seen. It would give us pleasure to know that it had been read by every one of our readers, and the lessons therein practiced. A little proper care of the teeth would save much pain, and preserve health and beauty.—Ed. H. or H.]

TEETH are said to be handsome, when they are white and well arranged. When Nature made them handsome, it took every where the same care of setting them in rosy gums; and the carmine of the lips set off their whiteness still more. They are not only ornamental but also very useful to health. Many, however, seem to be ignorant of that important truth. Nevertheless the slightest attention is needed to convince oneself that teeth are absolutely necessary to the preservation of the animal economy, since they are designed for one of our principal functions. How many teeth were broken by imprudence and vain show, especially among those set for the trituration of food, and consequently for the easy digestion of the stomach, which is only the secondary agent, and above all the protector of health; hence, if it is deprived of the preparatory work of the jaw, and receiving but food half triturated, its various functions are laborious—wasting slowly its elasticity, it grows weak, and loses that vigor which, when once lost, can not be restored by the most powerful tonics and the richest of victuals. "You are a foe to your life if you do not masticate well," says the Latin proverb. Those who have good teeth, and do not masticate well, can profit by this lesson. But what can we say to those who have bad ones? They must guard against that difficulty by dint of care, since a good mastication is so necessary to health. Yes, when the uneasiness, the bad digestion, and the weakness of the stomach set in, one says: "If I had my teeth I would give a great deal;" but when you had them—it was perhaps troublesome, but it is far more troublesome at present. A physician said very wittily: "Formerly the fable of the stomach and its parts was composed, but if at present we wrote that of the stomach

and the teeth—oh! how numerous would be the wrongs of the latter toward the former." The same writer attributes rightly a great number of diseases of which the cause is unknown, to the impurities that the saliva of slovenly mouths carry in the blood, bringing them along by mastication. This causes, at length, a bad chyle, always injurious to health.

The teeth are as necessary to health as to beauty; it is for that reason that we always seek the means of keeping them sound. The process for that aim is ordinarily slow. It is submitted to general rules, which I will explain as briefly as possible.

Generally the teeth of the first dentition are not susceptible of any care for cleanliness, unless they be effected by decay, in which case they must be plugged, and brushed often in order to check the progress of that affection. It is at the age of seven or eight, that children should be taught the habit of brushing their teeth twice or three times a week, with a soft brush, so as to provide against caries, and the pains, more or less smarting, resulting from it. By these means the teeth, and the mouth, are kept in a state of cleanliness and freshness which is so agreeable. In case the teeth should be covered with tartar, it would be necessary to remove it to avoid caries or inflammation of the gums. Another inconvenience of tartar is that it causes an offensive breath.

From the age of fifteen, the teeth must be brushed every day, and with a powder well prepared, two or three times a week. The remainder of the times with a liquid acting like a tonic, which will dissolve in the same time the mucus deposited on our teeth while sleeping. Experience teaches us, gentlemen, that their daily cleaning is their best preservative. It would be more suitable to clean them after meals, in order to remove the alimentary substances; and if particles of food are deeply placed in them, a tooth-pick should be used, a custom generally known at the present. There are parties who satisfy themselves with a piece of linen to rub their teeth, without taking the precaution of rinsing the mouth. This is far from being the clean and proper way; on the contrary, it is very injurious, because a certain pressure is made on the gums, and that habit

has no other advantage but that of gathering and hardening tartar in places where it is liable to accumulate itself, that is to say, between the teeth and their necks.

Now, persons wearing false teeth are not absolved from cleanliness, more than others; they should take great care of the mouth; if otherwise, the sets cover themselves with food and tartar, which, remaining habitually in moist and warm places, become infected, and cause a great deal of inflammation to the mucous parts, and when the mouth becomes the seat of an intolerable smell. Unfortunately, gentlemen, we have often the evidence of what I have just said. A man must despise himself to a great extent to keep so much dirtiness, and we, poor dentists, are often compelled to stand a good distance from these persons, and in spite of us, their breath, which is able to kill flies while flying, reaches us; we would not be so unlucky if nature had given them, as the alligators of San Domingo, under their lower jaw, the advantage of having a gland holding musk.

Though the rubbing of the teeth with a mere rush dipped in aromatized water is nearly always sufficient for maintaining the cleanliness of these organs, there are nevertheless persons there by the nature of their constitution, or by previous negligence, who are compelled to seek more energetic means, that is to say, making a great use of powders.

I shall say a few words on those which are still employed at present. Coal, well ground, is a popular dentrifice; it is an antiseptic; its use is most given up, still they prepare it in our drug stores; its action is nearly useless on the enamel—its constant use ends by causing the teeth to appear black, and the gums as afflicted with scurvy. This applies also to burnt crusts of bread, which are used by several persons.

It has been used for some time, because it was believed that the chimney-sweep's teeth were always white—that belief is erroneous. Their teeth appear white because their faces are black as for instance, with negroes it is the mere contrast of the color of their skin. Notwithstanding, the latter possess good, handsome, and strong teeth. Its use is utterly unclean. Cinchona is a torpid powder, but its taste and color

on the one hand, and on the other its tanning principle, which at length make the enamel yellow, can not recommend it as a dentrifice. It has, however, the property of hardening the gums. What I have said of cinchona can also be applied to tobacco.

Salt is by no means injurious, but it determines a considerable secretion of saliva.

Cigar-ashes are also in use; that powder is very unwholesome—it is too strong an alkali. Alum, that substance which we can rank with tartaric and oxalic acid, are too strong powders, unless in order to use them we mix them with an absorbing substance having the property of neutralizing their acidity. We must mistrust those patented liquids and powders, the pompous names of which fill the columns of our newspapers, ornament the corners of our streets, and are used as mile-posts on our country roads. Remember well, the action of these patented drugs is magic—it is exactly there where lies the evil, because the only dentrifices which can give quickly a shining white, ivory-looking appearance to the teeth are acid. The calcareous phosphate, which is the base of the enamel, is dissolved, causing its polish to be removed, and the teeth thereafter are more liable to retain that kind of mucus which previously had a tendency to accumulate on them. They assume an indelible yellow tint, and if you continue to use those compounds, if the acids constituting their bases are too concentrated, they will soon uncover the gelatinous substance of the teeth, which will cause aching, caries, and their extraction will become unavoidable.

Yes, gentlemen, the first quality of a dentrifice is to clean the teeth thoroughly, and without injury.

1. "Whatever may be the mode of preparation of those tooth-powders," says Dr. Maury, "we must exclude from their composition, all substances liable to alter the enamel of the teeth, since those sorts of preparations are to be used only to maintain their whiteness by removing the tartar which gathers on them."

2. "You must note their action on the gums." Are those conditions observed in the dentrifices offered to the public with the most pompous names? I entertain great doubts about that. It is a mere speculation now-a-days, and the voice of interest very often stifles that of humanity.

This induces me to say a few words on an article which each of you, I am sure, possesses—tooth-brushes. Each hair of them may be considered as a tooth-pick, the daily use of the brush cleans the teeth and the gums, and saves them from many diseases. Brushes vary a great deal in their form, that is why you must choose them. For children, they must be straight, and very soft; for adults, they must be so much less hard as the gums are softer. For instance, if you select a hard brush you erase thus the enamel in some ways, you lacerate and bleed the gums, you uncover the non-enameled

substances of the teeth, they will totter, sensibility will ensue, and afterward the tooth-ache.

An article every body should possess is a tooth-pick. It must be used only when a few particles of food are driven between the teeth, which they annoy when they can not be taken off in spite of the efforts of the tongue. That is the only circumstance when we can rationally recommend the use of a tooth-pick. The teeth and gums should be tormented the least possible with that instrument, or any other similar object.

There is still another error, which I must note. It is the use of the end of a penknife as a tooth-pick. By that process a few blades of the enamel are exposed to be cut off, and unfortunately those occurrences take place and caries act in that place. Next, are you always sure that your knife is clean? This is again a very delicate matter, because while cleaning your teeth with that instrument you can wound the gums and bring on inflammation. The best tooth-picks are not made from gold, silver, or steel, but those which are manufactured from quills.

Formerly sponge and cotton plugs were used for cleaning the teeth; this habit was far from being suitable for keeping the mouth clean; they had the same disadvantages as the linen of which I have already said a few words. Independently of the hygienic care required by the teeth, there are some other precautions to be taken in order to preserve the beauty and soundness of those organs, and those precautions consist in avoiding carefully all that is injurious, or may become so. As there are many, I shall select the most remarkable, and I will be as brief as possible.

1. You must avoid washing your head in water too cold, or too warm, using those astrigent and caustic remedies to remove freckles, or dying the hair.

2. Not to break with your teeth too hard objects, or cutting threads, or any other thing with the *incisive teeth*, for they become notched and decayed.

3. Never leave particles of food in these organs, nor use too hard dentrifice powders, or elixirs, tinctures too much acidulated.

4. While eating, avoid taking food or beverages too warm, or too cold, because the sudden transition between those two extremes is always injurious to the teeth. *Frigidus inimicus dentibus*, said Hippocrates with reason. When we smoke a pipe or cigar, the mouth is warmed, the larynx becomes dry, and then you drink—and even

sometimes very cold water that may cause slight inflammation of the dental pulp.

5. Be very careful when drinking mineral waters, for they can irritate them, render them painful, make them turn yellow, and give them a dark covering.

Abstain from sweet things: a proof that they are injurious is that I have met in my practice confectioners, still young, whose teeth were nearly all carious. Druggists come under the same heading, because frequently they are obliged to taste their preparations, acid or sweet.

A thing that is very often done, and about which we are careless, is drinking out of the same glass as another, or smoking from the same pipe—that is far from being clean. It occurs often that an impure saliva left on the edge of a glass, poisoned those who drank from it afterward.

6. Do not be great lovers of crackers and biscuits, they always contain acid powders. Americans have generally very bad teeth—they may say that they are the greatest biscuit-eaters of the world.

7. Abstain as much as possible from the use of gaseous waters, such as soda, which is relished so much in the hot season—it is acid, since it is composed from tartaric and bi-carbonate of soda. Ice-cream is also very injurious. As for myself, I must confess that I am a great lover of it; do what I tell you, and not what I do. As a proverb says. Salads are unwholesome: notwithstanding, taken seldom and in small quantities, they can stimulate appetite and facilitate digestion.

8. Feats of strength performed with the teeth are absurd; those who indulge in them ought to be punished like that youth, who, says the Lemartie, broke all his front teeth, who bet that he would throw over his head a chair which he held with his teeth by the upper part of the back-board to achieve that noble feat. Another fellow, more imprudent, caused himself to be hoisted up from the ground to a window by means of a rope, which he held in his teeth. When he reached a certain height he lost his four incisors, and broke one of his legs in the fall. Some others, says the Doctor, find pleasure in grinding drinking-glasses between their teeth, and wounding their mouths gratuitously in the attempt—one would suppose that the life of these maniacs is a perpetual challenge to the Almighty who gave it to them. The loss of a tooth is a real misfortune, since it can not be repaired. A tooth is worth a diamond, says one of our authors. Remember these few words and try to put them in practice.

Work.

BY REV. CHARLES H. BRIGHAM.

IS man naturally lazy? Is work only an artificial necessity, entailed on him by the primal curse? Will there be any need of work in the heavenly state, and for the disembodied soul? Which is the more exalted condition, the condition of work, or of rest? Dr. Bushnell tells us that play is superior to work, and is the ideal condition of man, that we go on through work to play, and that we realize the spiritual end when we make play out of work. Probably even the most industrious have a dream of the time when they shall stop working, and shall only have endless joy in the results of their toil. That work is to be eternal enters into no theory of duty or destiny. It may last as long as physical life, but it will not last as long as immortal life. In our vision of the future we see work rounded and finished, and Paradise regained when there is no more call for service. If labour is a penalty for sin, of course it will cease when salvation is established, and the penance is done. A Gospel that should announce to men everlasting work as the law of their being, would not be good news; its resurrection would only be a resurrection of damnation.

But whether work is to be eternal or not, it is certain that for a vast majority of men in civilized lands it is an inexorable law. There are savage tribes who can live with very little work, in the lands where the warm sun protects their unclad limbs, and the spontaneous fruits of the soil and the trees are ample nourishment. In the blessed islands of the Pacific, the primitive indolence of Adam may be perpetuated. Not so in civilized lands. The artificial wants, and the luxuries of life, not less than the stress of weather, and the supply of food, make labour necessary for the mass of men. And these artificial wants multiply about as fast as labour-saving inventions. There are undoubtedly more "loafers" in American cities now than there were fifty or a hundred years ago, when loafing was not allowed by custom, or by law, and was punished as sin. Yet the actual amount of labour done to-day in all kinds, taking society throughout, is probably relatively, as well as absolutely, greater than it was fifty years ago. There are many more shifts and shows of work now, in which the pretense is kept up, such as clerkships in the public offices,

insurance agencies, and innumerable salaried places; but on the whole, as much work, and as much hard work, is really done, as ever. The life of a farmer—in New England, at any rate, was never harder than now; and he will have very few days of leisure, if he is to get support from the produce of his acres. The toil of the factory is more steady and wearying, than any artisan or mechanical toil of the former generation. When garments were homespun, the wheel and the loom had their intervals of rest. But now, if the daughters of luxury have ceased to spin and weave, their sisters in the great quivering and roaring mills must keep on early and late, in all weathers, from day to day, and from year to year.

And if the fashionable woman has ceased to spin and weave, she has not ceased in her way, to be a worker. Harper's *Basar*, and the extra sheet of *The Independent*, and *Madame Demorest's Bulletin* compel her to care for raiment so diligently, that she has no time for books, and hardly any for sleep. The trimming of garments, which fashion obliges, is now the most unrelenting and fatal of necessities. The wealthy house is much more a "workhouse" than the country refuge bearing that name, in which the poor, and the weak-minded find their apology for a home. As hard work is done all the time in the chambers of the Fifth Avenue, as in the factories of Lawrence or Lowell. To keep up with the changing fashions, even the fingers that wear diamond rings must be nimble and constant in their task. The calumny is harsh and unjust, that these butterflies who sport their gauze, and ribbons, and flounces, their fairy raiment in the sunlight, are idle and do nothing. Half of their time they are busy as bees in preparation of this fluttering show. Has not a more careful watch of the frivolous insect shown us that the butterfly is as industrious, in its way, as the bee, though it hives no honey for a winter store?

We are a nation of workers; and we have not men and women enough to do the work that ought to be done. Every one complains of hard work, from Bridget in the kitchen to Mrs. Grundy in her calls of scandal. Is not the pastor of a city, not to say of a country church, proverbially hard-worked in making calls, in reading prayers, and in preaching sermons?

Are not physicians cut down before their time by over-work? Must not a lawyer, to be successful, "work like a Trojan?" Think of the work that a statesman does in franking copies by the myriad of speeches that nobody reads, and that have perhaps never been delivered. Think of the immense labour of such managers as Fisk, Gould & Co., in manipulating their railway shares, running opera houses, and buying up judges. Do not college professors claim that they are over-worked, as well as underpaid, though they perhaps lecture three times a week, for an hour, to a class of ten or six? Are not police officers hard-worked, in having to lounge in a dingy basement from morning to night? Who works harder than the revivalist, who goes through the land saving souls from the Devil by his incessant pleading and threatening, unless it be the clown in the circus, who has to make the same jokes, and perform the same antics six times in the week before gaping crowds? Edward Rulloff, working on his theory of language, up to the day of his legal strangling, is a type of the industry of this great American people, labouring incessantly, and boasting its labour.

For however much we may covet a state of idleness, we have here no pride in the Neapolitan laziness—we do not glory in having nothing to do; our *dolce far niente* is for the future, and not for the present time. Every man claims that he has some kind of work, and every woman, too. One does hand-work, another brain-work, and another tongue-work. The glib talk of prayer-meetings, repeating the worn phrases of exhortation and quotation, is mistaken honestly by many for "religious work"—and it has one result of hard work, it wearies the speaker and the listener. An auctioneer works very hard to sell a few dollars' worth of stuff, and fairly earns his commission in his vociferation. Ladies call their "work" that light sewing or embroidery which they take for afternoon visits, and aver that this kind of work assists social intercourse. Even one who has nothing to do, tells what hard work he finds "killing time" to be. Usually the idlest men are the most given to complain of the burden of their cares. The hardest real workers have the easiest souls; they have no time to think of the pressure of their work. We knew a man who was always sick on Sunday, as that was the only day on which he had time to think of his health. And there are not a few who discover how hard their work is when they get a short release from it.

In a civilized community there must be all

kinds of work, and all sorts of workers; some who work in physical things, and some who work in spiritual things; some who work many hours, and some who work few hours. And there is not, after all, much difference between the kinds of work, in their dignity, or their draught upon strength. A drudge in writing novels is no better than a drudge in washing floors. The larger part of the work of all men and women is work of a routine and mechanical kind, housekeeping, or shopping, or machine-tending, or driving carts, or digging in the dirt. This work must be done at any rate. The Boston millionaire may be willing to do without the necessities of life, if the luxuries are only left to him; but, if all men were of his opinion, there would be no luxuries of life. And when it comes to construction, the toil of making luxuries is about the same in its wear and tear as the toil of making necessities. There is as much work in cooking a partridge as in cooking a potato, in weaving a mosaic as in laying a brick wall, in painting a landscape as in painting a barn. The brain may have more to do in one case than in the other, but the toil of the hand is as severe.

But the purpose of this essay was to speak of work as a part of healthy life, to be associated with study and travel, and recreation and home, which have already been considered. The essential thing of work in its bearing upon health is that it shall be occupation of some kind, that it shall take thought, and care, and attention. No work is really good for much or worthy of the name, to which no mind is given, which is not in some sense spiritual as well as physical. There are very few kinds of labour in which the mind may not be concerned, while the muscles are busy. The most servile toil has soul in it. A washer-woman's toil is not very far from that of a chemist; a skillful carpenter is half a mathematician; and a sailor is an astronomer in his way. The distinction which we draw between hand-work and brain-work is not exact. Hand-work without brain-work would bring stupidity, as brain-work without hand-work would bring paralysis, which is the same thing in the end.

There are, indeed, kinds of occupation which do not seem to be work in the proper sense, which imply rest and quiescence. "They also serve who only stand and wait." A sentinel is occupied when he is at his post, though he does perhaps absolutely nothing. A night-watcher is occupied who waits at the sick-bed. Fishing all day long without a bite, is occupation. Yet there are very few tasks which are not in the

proper sense work. Our work is that to which our thought and attention are applied, whether we be quiet or active. The work of a watchmaker is just as real as the work of a blacksmith, though it has much less play for muscle; the work of a clerk with the pen just as real as the work of a mower with the scythe. The microscopic study of the wing of a mosquito is harder work than hewing coal in the mine. Perhaps the hardest work is the work of keeping a school for a hundred stupid, noisy, obstinate and restless boys and girls, supplying them with brains, and patience, and conscience. Not any work may be made hard work by the way in which it is done. All kinds of work are easy to some natures, and hard to others.

Some kinds of work, it must be said, are in themselves unhealthy; yet it is difficult to see how they can be dispensed with. White-lead is a necessary of many processes in useful art; and this substance is made at the peril of life and limb. If we will have our knives bright, there must be men whose work shall be to polish steel; we know what danger comes to the lungs in that industry. If the cities are to be clean, some must sweep the streets, and fill themselves with foul dust in that business. The first precaution can not make healthy some of the most important occupations, which create all odours, concussions of the air, abnormal development of some muscles, or over-strain of other muscles, or of brain. No ventilating methods can make mining a healthy business, for it is away from sunlight, which is the chief source of health both to soul and body. After all precautions, a large part of human labours, essential to the comfort, if not to the existence of civilized life in cold climates, will remain under to the charge of "insalubrity." Somebody must do these works, yet no one who would keep the lungs, and the heart, and the mind sound will deliberately choose them. Admitting this previous necessity, and that there must be a large class of men and women who will be compelled to disregard any rules which may be laid down about healthy work, we may mention some general rules which the rest will do well to follow.

Let work be in the day-time. We may take literally the saying of the Divine Man, "I must work while it is day," and believe that if we do our work in the day-time it will be more the work of the God of Light, than of the Prince of Darkness. We may play in the evening, but we had better do our day's task in the day-time. It is as good advice for the student as for the artisan, for preachers as for ploughmen. Even

the editor of a daily morning journal will lengthen his days, if he works in the day. Other things being equal, the first hours of the day are best for work, and the work should end before the play begins. Work should come when body and mind are fresh from sleep, and have their powers restored. We shall have more to say of this when we come to speak in another essay of "Early and Late Hours;" here we only insist upon *work in the day*.

2. *Work in comfortable surroundings!* Let no one, where it is possible, have his place of habitual labour in dark, or dirty, or close, or reeking places, which are not visited by the sun, or where the air is poisoned, or where there is any sense of a prison. Refuse to work in holes and corners. In London, and even in New York, there is the strange solecism of merchants and bankers who build fine houses on the avenues to eat and sleep in, storing them with comforts and luxuries, while they do their day's hard work in narrow offices, in dark streets, in the midst of dust and litter. A workshop of any kind ought to be as conveniently furnished as a house, with all the appliances that can make labour easy and pleasant, with good things for the eye as well as for the hand. A fine landscape painting is as much in place on the wall of a counting-room as on the wall of a drawing-room, and will have in the counting-room a more abundant ministry. The workshop ought to have not only all the tools of the trade, but some things to show how the trade is joined to the higher sentiment, ought to be made beautiful by the suggestions which are set around it.

3. *Work heartily.* Do not follow any occupation which is absolutely distasteful and repulsive, any kind of work which is uncongenial. This may be endured for a time, from the emergency which calls for such work; but the permanent and positive occupation of our lives ought to be one which we can keep without loathing. There are very few cases in which work ought to be martyrdom, or the toil of hand or brain be felt as a "living sacrifice." Work need not be play, but it ought to fit in with the play that we prefer. We should not go to it sullenly. Any business is bad which one feels to be oppressive and hateful. All healthy work will be cheerful work. One may take indeed, an occupation which is distasteful at the beginning, but after a time becomes pleasant, and even fascinating; for there are acquired tastes in work as in food. There are clerks who love to copy and to add figures all the more that they have grown gray in that monotonous business.

The organ-grinders come to love their endless round of tunes, so doleful to the ears of those who hear, and they wonder than any should ask them to "move on." But when any work continues to be unpleasant, and grows all the time more disagreeable it should be abandoned. No kind of work is healthy which is "penitential" in the Catholic sense of that word, which has in it any of the seeming of penance. The soul ought to be as one with the body in work, to be at ease, and sympathize with the work.

4. And we should add as another rule of healthy work, *that the body, too, should be at ease.* No work is good that fastens the physical frame in a constrained, unnatural, or painful posture, that distorts any of the limbs, or develops one part of the frame at the expense of the rest. Of course, in most muscular employments some muscles more than others will be called into exercise. There is probably no trade that gives equal scope to all parts of the bodily frame. But where the inequality is excessive, where all the strain comes upon one part and draws away from other parts strength and nourishment, it is bad for the man. The attitude in work should leave as much freedom as possible to all the limbs as well as to all the senses. When we consider that absurd doubling of the lower extremities upon a board which is traditional as the tailor's position in his work, it is no wonder that the proverb should hold its place, of the tailor as only the ninth part of a man. No work is healthy which does not allow frequent change in position, does not allow one to stretch the limbs, to keep the head erect, to keep the spinal column to its natural curve. No work is healthy which hastens paralysis by its tyrannous hold upon nerve or muscle. Ease of body should be a rule of labour.

5. Then healthy work *should have its reasonable bound*, and should not be too far prolonged. No absolute standard of time can be laid down, even for works of the same kind. Some constitutions will be tried more severely by six hours of daily toil, than others will be by twelve hours. A feeble body will not bear so much as a vigorous body; Hebe with all her airy grace, can not work as long as Hercules. But the length of work must vary not alone according to the native strength of the person, but according to the kind of toil. Sermon-writing is more fatiguing than knitting, even when the sermon is only the repetition of an old story, and has no original thought. Every man and woman must judge by the experiment how far they can prudently go in the work they have chosen. Work ought not to go beyond this bound, whether it be four, or six,

or ten hours in the day. The old farmer's rule of working from day-break to dark, is a poor rule even for the farmer, and not necessary in these days of improved machinery. Fatigue tells the bound of healthy labour; no one ought to go on working, either with the hand or the brain, when he is tired. It is better to stop before fatigue comes than to go one hour or one minute beyond it. There is no merit in going to bed tired out every night.

6. And another rule of healthy work should be *moderation in the way of working.* Do not try to do too much at one time, to do two days' work in one day, to do twice as much as any man ought to do, or even to do as much as some friend who has more nervous energy. The spirit of competition ought not to dictate the way of labour. And a man who works by the piece, and is paid by the quantity that he does, ought not to work any harder than one who works by the day. Vigorous work need not be redundant or hasty work. The curse of labour in America is the spirit of rivalry, as it is the bane of amusement.

We shall have more to say of this in a future essay. The question of work is coming to be the great question of our age, and there are fearful prophecies of woe from the restless and unsatisfied desires of the working classes, maddened by the theories and the arts of the demagogues. There is danger in the spectacle of any class who try to avoid work, and whose example teaches that an idle life supported from the interest of invested capital is more honorable than a life of daily and regular toil. No man is really safe in the community, however sound his frame and however abundant his income, who has not regular work, and has no knowledge of any kind of work that may yield increase. Self-preservation in many ways emphasizes the counsel to every person to have something to do. Endless amusement fatigues much more than steady work. If we had to choose between working all the time, and playing all the time, we should wisely choose the first alternative. The health of individuals, of communities and of States, comes not from the multitude of holidays, but from the wise use of the days of toil.

EVERY productive occupation which adds any thing to the capital of mankind, if followed assiduously with a desire to understand every thing connected with it, is an ascending stair whose summit is nowhere, and from the successive steps of which the horizon of knowledge perpetually enlarges.—Froude.

Evils of Hair-Dyes and Cosmetics.

BY SARA B. CHASE, M. D.

THE composition of a very large majority of the "hair washes," "hair tonics," and hair restoratives, so largely advertised throughout the country, and which line the shelves of all the drug-shops in every town in the land, consist chiefly of acetate of lead, flowers of sulphur, and some neutral substance as a medium, as water or glycerine.

Many, in former years, took the following remedy upon their own responsibility to the druggist, or purchased the crude materials and compounded them for themselves as they had occasion to use the wash:

Sulphur..... 1 drachm.
Sugar of Lead..... $\frac{1}{2}$ drachm.
Rose Water..... 4 ounces.

Some found that they experienced unpleasant and, oft-times, serious effects from its use, and would leave it and resort to some one of the various patent preparations so loudly extolled, without knowing that they were using the very same deleterious substances gotten up and sent out with attractive labels under high sounding names: "Mrs. S. A. Allen's World's Hair Restorative," "Ring's Ambrosia," "Hall's Vegetable Sicilian Hair Restorer," etc.

Of course, all physicians acquainted with the thogenesis of lead in its various forms must condemn all of these mixtures as dangerous to health and life. Some persons are extremely susceptible to the influence of this metal, and can not use it for a short time even without feeling its bad effects. Others may use for years with apparent impunity. The latter are no right to offer their experience as proof that it is harmless, for a much wider experience in them can prove it is dangerous.

Several cases have come within the range of observation wherein lead colic, lead palsy, and almost fatal poisoning were caused by just hair-dyes, and very many cases have I met wherein the patients were compelled to discontinue their use on account of the positive and serious symptoms with which they were affected whenever they applied these preparations to the hair.

Partial paralysis of the pneumo-gastric nerve destroying the free action of the lungs, accompanied with lead-colored face and tongue, are by

no means infrequent, sometimes terminating in death. I might be permitted here to relate a case which came within my observation, as the symptoms were such as are frequently met with without the patient being aware of the cause. Mrs. ——— had been accustomed to the occasional use of Hall's Vegetable Sicilian Hair Restorer, more or less frequently, during the space of two years, always feeling a sense of weariness or debility after each application, continuing a day or two. The eyelids seemed to close down irresistibly, accompanied with lachrymation so profuse that her face was constantly wet with tears. She had sore eyes and styes, that could not be healed while she continued the use of this preparation. These symptoms were attended with paleness of the face, and cadaveric and anxious look, constipation, and sometimes pain in the bowels. Not attributing these symptoms at the time to the poisonous effects of the hair-dye, but supposing it to be weariness from hard work, she continued its application once in two or three weeks. During the winter, one afternoon she applied the liquid about milk warm, thinking thereby to hasten its restorative effects as she had neglected its use until her hair had become whiter than usual. About midnight she was seized as she says "with a strange feeling." The house seemed to turn over. Every attempt to lie down or even tip the head in any direction was attended with this vertigo, so intense as to set every thing in the room to turning "upside down." This was accompanied with a frightful headache, and "a feeling as if her mind was gone;" could not keep the points of compass or tell where she was.

By antidotal treatment she was in a few hours so far relieved that she could with a great deal of care lay her head upon her pillow, but for several days she could not lie down without a sensation as of the bed going from under her, and had to be held up when she walked, on account of this vertigo. For nearly a week she had to keep a band tied tightly around the forehead on account of the feeling as if her head would burst, and the debility and exhaustion which I have before mentioned, disqualifying her for the accomplishment of any thing, continued for nearly two weeks.

I have frequently met cases of erysipelatous eruptions, commencing on the scalp and running to the ears, and finally extending nearly across the face, without doubt caused by these washes, and many are troubled with "sores" on the scalp, which come on soon after their application, and aggravated by each repetition.

It is not within the province of physicians, as such, to condemn the various arts of the toilet, however vain and trifling they may appear to us, only so far as the substances used as cosmetics are deleterious to health. The use of powders for the skin, and artificial coloring is common, and such being the case however much we may disapprove of it, persons should know something about the materials from which these are prepared, and be placed on their guard against dangerous combinations.

The means used for whitening the skin are numerous, and some of the substances made use of are neutral, and are productive of no deleterious effects, only so far as by their application the pores of the skin may become obstructed, and the person suffer only from the natural results of such obstructions. Among these may be mentioned powdered *French chalk*, Venetian chalk or "talc," carbonate of magnesia, finely pulverized rice flour.

All these powders however have the objection that the hue they produce is not a very brilliant one, and not being satisfied with the effect produced by them, the "*cosmetiqueur*," with daring hands, has laid hold of the most potent and dangerous drugs, and offers them for sale to the first chance comer, and thus many a tolerable complexion has been ruined, and many a woman has poisoned her constitution by ignorantly using these perilous stuffs.

Among the most innocent of these substances which may not be considered neutral may be mentioned the preparations of bismuth or "heart white," precipitated carbonate of zinc, mixed with an equal quantity of French chalk, and if the ambition of beauty had stopped *here* we should have had little cause for complaint; but, in order to obtain a still more brilliant color, recourse is had to those unwholesome metals, lead and mercury. These, in the form of "flake white" and mercurial white precipitate, are in very common use. The names by which these washes are known are as numerous as the parties presenting them for sale, and, of course, indicate nothing of their composition, are only intended to attract attention, and convey to the seeker after artificial beauty the idea that here lies the *summum bonum* of their search: "Bloom

of Youth," "Oriental Cream," "Magnolia Balm."

Ladies frequently purchase "flake-white" in powder and prepare a wash for themselves, not knowing that said flake-white is a preparation from lead, and, even if they are told this, they are ignorant of the danger to which they are exposed. We have met several who are constantly troubled with sore eyes, and some with weak eyes, to such an extent that permanent blindness was threatened from the use of lead washes on the face.

A lady who had always been remarkably healthy, with a clear, beautiful complexion, was not satisfied with gifts bestowed upon her by Nature, and adopted the habit of powdering her face with some of the preparations extant, but later she began to use *flake-white*, preparing herself with alcohol. This she would apply from day to day without washing it off, frequently for a week at a time. Her health began to fail. No pain, but debility, weariness, and a decided darkening of the skin which was manifested whenever she was not powdered. She went to a *water-cure* for health, but returned home no better. Physicians said she was poisoned, but did not suspect the lead upon her face as the source of her poisoning. This discoloring of her skin was apparent some four years before her death, and she was a constant seeker after health during most of this time, yet constantly grew worse. Her hair commencing to grow gray, she used Hall's Vegetable Sicilian Hair Restorer, and in addition to this, the house in which she lived was painted inside, and from this time she began to decline rapidly. This was only a few months before she died. Her memory was gone, her nervous system completely prostrated, her skin assumed a leathery consistence and could not be aroused to action, her vision was dimmed, bowels inactive, in fact there was a paralysis or letting down of all the organs of the body. She was finally attacked with vomiting, which continued almost constantly for two days before she died. She never suffered any pain, even her vomiting was not accompanied with nausea, probably on account of the general paralysis of the nerves of sensation.

I will not enlarge upon the various means of tinting the skin, only to speak of *vermilion*, which is to be met with in the cheap rouges, sometimes called "Theatre Rouge," "Castilian Rouge," etc.

In the more expensive rouges the tint is simply *carmine* which is generally considered harmless when applied externally, but *vermilion*, being the sulphate of mercury, is highly poison-

is, and those who use it can not fail eventually be injured by it.

But the height of cosmetic daring, it would seem, has been reached in the new process known as "enameling," which is nothing less than painting the face with lead paint, and for its purpose are used the poisonous salts of lead. The skin is prepared by an alkaline wash, a sliding paste is used to smooth the wrinkles, fill up the crevices, etc., and the color laid on, first the white, and then the red. It is needless for us to enlarge upon the dangers of thus exposing the skin to the poisonous action of lead, and from a cosmetic as well as a hygienic point of view they must be condemned, for the effect is so much more brilliant than Nature, that any server can see at once that it is unnatural; and as the very design of the art used is subverted. We all know doubtless by observation that the skin is injured by most of the preparations used in cosmetics, and that when ladies once commence their use and continue for any length of time, they are compelled to persist in their using the remainder of their lives, or are forced to be the daily witnesses of their own folly whenever they approach the mirror, which, of course, every woman will do more or less frequently.

The process of enameling is so new, and so comparatively have as yet ventured to try that we have had no opportunity to observe deleterious effects, yet that it is dangerous to health and even life, no one who is acquainted with the poisonous effects of lead can doubt.

ARE ARTIFICIAL TEETH CAPABLE OF PRODUCING SALIVATION.—The question whether silver plates for artificial teeth can produce salivation or not is one of much interest to very many persons, and the following from Dr. Connell will be of interest. We have not for ourselves of the injurious effects of such plates on the mouth. If worn they should always be taken out at night, and placed in cold water, and the mouth thoroughly washed out with water, and, if need be for cleansing, a little salicylic acid soap used.

My attention has been called to a case which points to the possibility of the occurrence of salivation and the constitutional effects of mercury, from the use of artificial teeth, and the importance of the circumstance has seemed to be sufficient to justify a mention of it; so that infer-

ences may become either corrected or confirmed by the observations of others of the profession.

The patient, in the case referred to, was a lady, who had used the artificial teeth that are now accused of having produced trouble, between two and three years. Before using them, her general health was good. While using them, her health became poor (*waning away*), and proceeded gradually from bad to worse, resisting every mode of treatment. She exhibited no special cause of illness, until the occurrence of salivation and sore mouth drew attention to the teeth. Then it was found that the plate upon which the teeth were mounted, which was a suction plate of the red rubber kind, presented a corroded appearance on the surface which came in contact with the roof of the mouth. And the circumstance that this kind of rubber plate is made up to a great extent of the sulphuret of mercury, suggested the possibility of the general ill-health resulting from this cause.

The teeth were removed, of course. The mouth became well speedily; and without any further treatment the lady's general health began to improve immediately in a very remarkable manner.

Upon mentioning this case to some medical gentlemen, it recalled to the mind of one of them another instance of salivation, resulting, apparently, from the same cause. Here, too, the disuse of the red rubber plate allowed the mouth to become well; and a set of teeth mounted on dark rubber was afterward used without any inconvenience resulting.

The red rubber which is used in making the plates upon which artificial teeth are mounted, receives its color from the sulphuret of mercury, which is mixed with it very intimately, and constitutes generally about one-third of the mass. This preparation of mercury is very insoluble, resisting, in the chemist's laboratory, the strongest acids; and it is difficult to understand what combinations can have taken place in the mouth to render it liable to absorption.

It is rendered soluble by mixture with the sulphide of potassium, but one would suppose that it would be protected sufficiently by the rubber with which it is thoroughly mixed and baked.

Are artificial teeth, under any circumstances, capable of producing salivation?

ONE can not learn every thing; the objects of knowledge have multiplied beyond the powers of the strongest mind to keep pace with them all.—*Froude*.

The Fool and the Farrier.

A TALE FROM THE PERSIAN OF SAADI.

BY JOEL BENTON.

A LITTLE fellow, not supremely wise,
Who had some malady about his eyes—
And suffered pain too tedious to endure—
Sought out a farrier to obtain a cure.

The dull horse-doctor, touched by no remorse,
Served him exactly as he would a horse;
At length, the patient, put in dreadful plight,
Awoke to find his utter loss of sight.

Deeply incensed, the victim—not a saint—
Went to a magistrate with his complaint,
And, throwing on the farrier all the blame,
Demanded damages against his name.

The judge replied, in terms not over-bland,
"In such a case, no damages can stand:
Were not the appellant *an ass*, 't is sure
He would not seek a *farrier* for a cure."

'T is sad, indeed, to make a patient blind,
But here the moral is not far to find.

MORAL.

Who takes his maladies to one unwise
Sees little—and, perhaps, may lose his eyes.

Good Nature.

A S welcome as sunshine
In every place
Is the beaming approach
Of a good-natured face.

As genial as sunshine,
Like warmth to impart,
Is a good-natured word
From a good-natured heart.

—Selected.

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

THURSDAY, April 5.

YESTERDAY, in accordance with a special invitation, we visited at Judge Delorme's in Milburn. Upon our arrival we were surprised at finding no one apparently ready to receive us. This was easily accounted for, when I learned that the whole family is literary in the most helpless way. They have not the means to live nicely without exertion, and yet their tastes are such as to lead them away from all labor. They answer the question of "What shall we do?" by doing nothing; and the result, of course, is a miserable, shabby, repulsive home, with irregular meals, and poor food, nothing but fine ideas, and plenty of books to nourish them.

The Judge himself is a fine conversationalist, and made our visit as pleasant as it could be, with the mother and daughter both out of the room, making the unusual exertion of providing something good to eat. We were not called to supper until nearly 9 P. M., and then were regaled with hot, sour bread, and hot cake. It was sad to see poor Mrs. Delorme at the head of the table, looking so completely wearied and bewildered, and utterly unable to enjoy her company. She had probably either forgotten the special invitation, or had been so in the clouds as not to think of the necessity of supplying invited company with any material food.

Henry is going with me soon to visit a most interesting family residing but a short distance from Judge Delorme. They are people of equally refined and intellectual tastes, but they are also possessed of common sense, and hold, to the fullest extent, the view that the meniality of an action consists alone in a menial way of performing it.

Saturday, April 7.—Bridget has been obliged to leave me before Madge is well enough to return, and the young girl whom we saw at the house on the mountain has come to assist me. I am in hopes of teaching her some of the ideas which we both thought her ready to receive. I am making a point of having plain food while she is here, and little variety at any one meal; at the same time taking pains to cook the food nicely, telling Mary the reasons therefor. I am teaching her how to make good bread, and

give her daily instructions in the proper cooking of meat and vegetables. She is very bright, impatient of fussiness, but ready to imbibe good ideas.

Easter Sunday, April 8.—Such a pretty lesson one could learn this morning in church. The font was filled with lovely flowers, and out of the midst of them arose a stately Calla Lily, with a bud by its side. I had no thought of this bud opening so soon; but, as the service progressed, the bud began to expand, stretching itself more and more, until at length it was wide open, ready to take its own pure part in the praises of the day. To me, and possibly to many others, the incident taught a little lesson relating to religious development, viz.: that sometimes even the Christian seems least active, perhaps is even despondent, and apparently little likely to burst into the bloom of good deeds, he may from very humility be most ready, and may much surprise himself and others by such flowering, or, "Out of darkness cometh light."

Wednesday, April 11.—The subject under discussion, at the meeting of our Society, was house-cleaning; and the opinions expressed were very varied and animated. Some very amusing descriptions were given of the mistakes, annoyances, breakages, etc., in different families. The general conclusion was that we should be more moderate about house-cleaning; that we should not tear a whole house up at once, but one room at a time; and that, in this way, it could be done more smoothly and satisfactorily.

Monday, April 16.—I little thought, when Miss Stanton made me her disagreeable call last summer, that I should come to take so much pleasure in her society. No two persons are so far apart as they may imagine, if they but make an effort to get together. It is so easy and natural, if one feels offended or aggrieved, to draw within a shell of reserve, dark thoughts are sure to follow, and we come to think the offender far worse than is really the case. Miss Stanton brought the children to visit me to-day. She is so fond of them that she with difficulty restrains herself from constant talking of thei

they make a point of keeping it out of the parlor.

They have a sewing-room in the upper part of the house, where a good sewing-machine and other conveniences are always to be found, and where all the mending and making are done during the day-time.

Thursday, April 26.—Last evening after we returned home, we attended a prayer-meeting with Aunt Minerva. We were very sorry to receive as much amusement as good, but it is not in human nature to resist the effect of such things as we heard. Aunt Minerva's Deacon jumped up very briskly, as soon as the minister concluded his own good and appropriate remarks; put his hands together, made a long pause, looking over the top of his spectacles until the attention of all present was drawn to him, and then produced the following brilliant thought: "Every interrogative question requires a negative answer." As if to impress the truth of his remarkable statement upon the minds of those present, he repeated it, and then went on to expatiate in a series of thoughts, or statements without thought, having no connection whatever with his first insane proposition, nor with each other. In the course of his wanderings he mangled a quotation, much in the style of a large class of persons during the late war—"give me slavery, or give me death." There was quite a variety in the remarks of the different brethren, but none quite so bad as those of Aunt Minerva's Deacon.

Tuesday, May 1.—Madge has returned entirely recovered, and Mary Dutton has gone home, not, however, with the prospect of benefiting her family much: for, while here, she attended a fair, at which she became acquainted with a young man, between whom and herself there sprang up so violent a friendship as in ten days' time to culminate in an engagement. Such a course of affairs was so new to me, that I remonstrated with Mary, but all to no effect. She laughed and chuckled to herself in the most good-natured manner, saying, "Why, goodness gracious, I know him's well's if I'd been acquainted with him sence I's a baby."

She assures me that her family will not have the slightest objection. This class of American people seems almost more heedless of consequences than even the Irish. We are quite in the way of love-making, for Aunt Minerva's and Mary Dutton's affairs are now followed by one of Madge's, who has returned to us with a "follower." We anticipate considerable amuse-

ment from this. With Madge's peculiarly pugnacious nature, the course of love, whether true or otherwise, will probably be very rough.

Tuesday, May 8.—Aunt Minerva is in the midst of her cake-making, and will be married Thursday evening. I feel quite helpless, as she will not accept any of my assistance. "Nobody knows how to make cake in these days." I have been somewhat ungraciously allowed to put some finishing touches to her wedding dress. Madge is in an intense state of delight and excitement.

Friday, May 11.—The event is over; there was a company of about thirty people present, most of them previously unknown to me. The Deacon and his wife started this morning on their wedding tour, and will be away a month upon what Henry calls a coustining expedition, for which pastime some elderly people have a special faculty. And now how free I feel! As if a heavy burden had been removed! Some cross we must always bear. We can not hope to escape at any time of our lives; but we can not avoid a sense of gladness, a leaping up of the heart, when a heavy and wearisome cross is taken from us without any action of our own.

Of late Henry's practice has been very much among the poorer class of people, and a new kind of assistance I have been enabled to give which I had hardly anticipated—of the religious kind. I have been brought in contact with persons, who, for many years, have absented themselves from places of worship, who, in their inmost hearts, are desirous of religious instruction, but, from a peculiar kind of pride which grows up in the hearts of the more ignorant of American people, disdain to receive it from the mouths of ministers of the gospel. Two or three of them have asked "the Doctor" to read to them, meaning by this the Bible. This he has done, and then committed to me this part of their care.

By this means a way for confidence and kindly feeling has been opened, which I trust may never be closed. I can not talk religiously in the stereotyped way; and, indeed, I am inclined to the opinion that quite as much evil as good is produced by that stiff, solemn, religious advice, which is frequently administered to the poor, much as a dose of disagreeable medicine is given.

Religious conversation, which is the natural offspring of present circumstances, and dictated by a warm and yearning affection for those about us, may produce much good, and probably

will, for earnestness of feeling is very positive in its influence.

Sunday, May 13.—Poor Miss Clinton came to church to-day, for the first time in twenty years. Henry feels as if he had gained a great victory in bringing her to this point; and, if he could only impart to her some brightness and hopefulness, I think he would anticipate a perfect cure. This lovely morning when all the air seemed full of God's praise, she was very gloomy. Her friends and acquaintances pressed around her, as she came out of church, to congratulate her upon her great improvement; but she met them with the saddest of faces, and the reiterated assertion that she attached no importance to this, that she should soon be in bed again. "When she felt the best, she was most

likely to be sick again." She could not, however, resist Henry's comical expression when he came up to her. He made a most dolorous grimace, which so far disturbed her solemn gravity that a half smile appeared upon her face, taking away something of that *chronic expression* which is so repulsive. I can look at positively distorted features, or maimed limbs, with sympathy; but that pale bloodlessness which comes from refusal to use God's good gifts of fresh air, pure water, and good food, and the substitution of one's own blind notions for those implanted by God, is always repulsive and disgusting to me. I remember the feeling as a very little child, and would not then have been able to account for it; but it now seems to me that this is right in this shrinking from such abnormalism.

Chinese Diet.

BY G. W. YAPP.

THE cost of a Chinese workman's food is not, on an average, probably more than eight or ten cents a day; and if the science of dietetics may be trusted, this regimen is deficient both in flesh-making and heat-producing elements, rice and herbaceous vegetables forming the basis, with very insufficient proportions of meat and fish. According to the deductions of European chemists it must be admitted that, with the exception of the silk-weavers of Hankou, the Chinese workmen do not eat enough or sufficiently rich food to compensate for the waste caused by hard work.

It is very difficult to make comparisons between the natures of different nations, in which climate, constitution, and habits should all be taken into account; but we may at any rate consider such evidence as is brought before us. In the first place, while the endurance of some Asiatics has often called forth the admiration of Europeans, there is little doubt that the general opinion is that they are not capable of the same amount of hard or continued labor that well-fed Europeans can perform; the evidence of disinterested observers, if it does not absolutely contradict that opinion, at any rate tends to qualify it in certain respects, and these qualifications are well deserving of attention.

The Lazarist missionaries of Peking, who employ Chinese workmen, and who might therefore be expected to underrate, rather than overrate the capacities of those whom they have to employ, declare that the Chinese are capable of doing very nearly as much work in a given time as Europeans. One of these French missionaries says that Chinese laborers are more robust than their Western brethren, that they frequently lift weights and carry burdens that would overtax the power of Europeans (which would probably translate Frenchmen, who certainly do not generally possess the same muscular power as Englishmen). This fact is attributed partly to the habits of the Chinese, who not using the same machines and utensils as Europeans, are accustomed to great exertion of strength, which exercises and increases the muscular powers, the greater part of the labor being carried on men's shoulders or in their barrows; it is only in the northern provinces of China that the employment of carts, asses, and mules for transport is general. Every European who visits China is struck by the number of coolies that he meets, the heavy loads that they carry, and the rapidity and dexterity with which the palanquin-bearers trip along the narrow, paved, and crowded streets of the towns.

rice. Well, is not rice a very rich food in those elements which produce heat? And according to the discoveries in Physiology, very much of the

strength of the body is supplied by those foods that are heat-producing, rather than tissue-forming.—Ed. H. or H.]

Keep the Distaff Ready, and God will Send the Flax.

BY FRANCES DANA GAGE.

IT is many a long year, fifty or more, since my mother sent my little sister and myself over the big hill to do an errand to the old Irish woman who lived there with her widowed daughter and her little ones.

"Get your sleds, girls; for there is quite a heavy basket to carry—a bundle of flax for Granny's wheel, and some meal, meat, and cheese for her New Year's dinner; it's very cold, but you love to coast; so draw yoursled up this side of the hill, and slide down the other, and when you come back up the other side, you can coast down this, and that will be rare sport, you know."

Off we trudged, well pleased with our work; for we loved to visit Granny, as we all called her; to hear her musical brogue, less common by far than now, and to hear her sing her Irish rollicking songs as she turned her wheel.

The forest path glittered with well-trodden snow, and the trees on every hand were strung with diamonds that the clear rays of the winter sunshine made brilliant beyond conception. Icicles hung like spears from every post and fence-rail, and the whole world was glowing like fairy land.

Little cared we for cold or toil, and our load was soon deposited at Granny's fireside. "Arrah! didn't I tell yez now," exclaimed the delighted woman, "when yez tould me to put by me wheel the day? Och, nanny mavourneen! it's meself that know'd it. 'I must keep my distaff ready, and God would send the flax!' and here it comes; and ye, wi' your eyes so rid! There was noe meal in kist, noe pertaties in the bin, and noe meat in the bar'l. Ach, nannie cushla! ye've no faith, ye've no faith!" I never forgot Granny Allison's proverb: "Keep the distaff ready, and God will send the flax." Mayhap, I did not quite understand its meaning then, at ten years old. But I went my way

pondering. It was a long time ere its full significance was revealed. But as I grew into womanhood, as the cares and duties of life came upon me, as the obligations and responsibilities which my surroundings imposed called for action, I slowly learned the import of those deep-meaning words; learned there were other distaffs and other spindles than those with which we spin threads to weave into garments to be kept ready for use, and also that there was other flax which the good God sends us than that which goes through the heckle; and those that kept not the distaff ready, and the spindle bright for turning, and the foot strong for the treadle, would fail to draw out day by day the strongest and most durable threads for their own and the world's good.

As I went forth into the world, among its bursting buds and flowers of spring, I noticed the plow in the furrow, and the golden grain dropped therein; the birds building their nests among the trees and grasses; the bees among the maple buds, and the hen preparing for her brood; the brooks wearing their own channels; the violets gathering their blue, and the rose its red. I asked myself, *Has all Nature animate and inanimate, instinct and intuition: lead it to be earnest, industrious, and persistent in its work—all but the human life?*

The spring gave place to summer and autumn; the flower perfected seeds; the yellow corn grew into a harvest; the birds filled their nest with life that flutter away when the snows come; the bees laid up their honey, and the brooks had worn deeper channels. But where was the instinctive life and freedom of my own soul, and the souls of those that surrounded me? what had we done to give health, plenty, life and joy to the future? Was our distaff always ready, and our feet upon the treadle? How many bundles of shining flax

had rotted? God sent flax that might have been drawn into beautiful threads, if we had been ready for the blessing, ready to act our part in the great drama of life's usefulness.

But our wheel was set aside by conventionalism. The distaff was not in fashion, custom had made the treadle vulgar, and the golden hours went by and no work was done. There was no bread for winter, no flower-seeds for the spring-time, no birds to come back and twitter their loves in our listless ears, no meandering brooks among the circumscribed existence watering the violets and roses of a healthy, happy existence; only (oh, pitiful tale!) a waste, dead pool of

stagnant water, giving out its miasmas and death.

Shall human bees lay by no honey, and human hens prepare no nest for future loves. Ah! let us once more try to get out the old wheel of usefulness, and, keeping the distaff always ready, and the foot strong for work, despite custom, fashion, conventionalism, or law, be a law unto ourselves, and carefully using the flax that God sends, take into our own souls *rest* and *peace*, with faith, like Granny Allison's, that to every human soul that "keeps the distaff ready, God will send the flax."

Ordinarily, Never.

BY P. H. HAYES, M. D.

"HOW did you like the *Cantata* at the Seminary last night, father?" I enjoyed it greatly. The singing was excellent, the parts were well sustained; and the white dresses, gaily festooned with flowers; the wreaths and the garlands; and above all, the bright faces; the spirited songs, and the graceful movements of the girls, lent such a charm as girls only can lend to any scene in life. But, my daughter, vocation trains observation. Those Seminary girls have large brains and bright eyes, but they are thin; they need the development, the roundness and figure, which more muscle and a better nutrition would give. Very few of that troop of girls will ever fill out the outline and the full and beautiful proportions of a well-developed womanhood. How can they? They have none of those free romping exercises in which the element of play and abandon enters at will. Only in this way can the *animus* of a free spirit enter the limbs and send the blood tingling to every part of the body.

Exercise, we say, develops and strengthens every part of the body, but it is true only in a limited sense as to the nervous system. When this is exercised so constantly, and without the balancing and bracing effect of the muscular exercise, its activity and its sensibility are intensified; but it neither grows nor is strengthened. There can not be growth and strength in brain without abundant nutrition; and there

can not be abundant nutrition without abundant digestion; and there can not be abundant digestion without free and daily exercise. The muscles are one-half the weight of a strong girl, and actually receive more than two-thirds of all her blood. The whole amount of blood in the body is about one-seventh part of its weight, or fifteen pounds in a girl weighing a hundred and five pounds; but this proportion will fail in every girl who sang in the cantata, and some of them have no more than two-thirds of the normal quantity.

The blood they do make, shut out so much from the free air and open light of heaven, is deficient in color and life-inspiring quality. There were a few *blanc mat* faces, which made me think of the disease the doctors call *anemia* or the pale-blood disease. Want of light pales and weakens every living thing, and, since the wonderful revelations of the spectroscope, it is a question *sub judice* whether the blood does not absorb the vapors of iron from the sun's atmosphere. Certain it is our finer senses are nourished by sun-light, and it is a first principle of the bloom and glow of health. Do you remember what the Prince of Morocco says in the Merchant of Venice:

"Mislike me not for my complexion,
The shadowed livery of the burnished sun?
Bring me the fairest creature northward born,

And let us make incision for your love,
To prove whose *blood is reddest*, his or mine."

Neuralgia, a disease of growing frequency, of which the single element is *pain*, is in nearly all its forms but an outcry of the nerves for better arterial blood, and nine-tenths of all the diseases that make so much work for the doctors are from poor blood, and poor nutrition.

In your ranks last night I saw many girls who had a right by nature to a large share of personal beauty, but they are shut up in-doors, they want muscle, figure, blood, color; they have indeed a flush, almost a fever, when excited, yet they will rise in the morning pale and languid. Madame De Staël is said to have declared she would give half her learning for personal charms, and I supposed girls knew by natural sagacity the value of beauty; if they do, they ought also to know that without *health* beauty is impossible.

Said I to a lady friend, a few mornings ago, "The prima donna we heard last night, had a painted face; I had a good glass and I am sure." "Well," said she, "it's *time* she began to patch herself up—she's *twenty-seven* years old!"

Superadded to our common human nature, every girl has her woman nature, which through all these years of school-life is undergoing the most positive, though half-unconscious evolution, and she can't help looking forward to some as yet purely ideal counterpart of herself, on whose arm she shall some day lean, and who shall give her the words and the "one look" no other man does or dare. Blessed be this God-given aspiration, never yet breathed in words, but how can it come to crownings and rejoicings through weakness?

Again these cloistered girls can not have the dignity and self-possession—*possession of self*—which spring from a sense of power; power they can not have without muscle—remember it stands for blood, nutrition, color, power, and from power come courage and endurance. As surely as they live, some of these girls will fall into the hands of the doctor, and he will discover that their malady has been slowly wrought into the grain and fibre of their being, and the cure, if ever it be radical, must be long deferred. Even now, some of them are "very nervous," have frequent colds, headaches, and imperfect sleep. It is a war among the members, a game of the right hand against the left, brains against muscle, mind against body, and body will win, not by strength, but by the might of *weakness*—strange paradox, "*mighty weak!*"

It is a great misfortune for girls to be entirely separated from the society and employments of home while acquiring knowledge from books. Girls should elevate and honor by doing, then, all parts of the work belonging to the keeping and adorning of a home in house, garden, and grounds, and in the care of pet animals. There is no substitute for these employments on the large scale, as health-inspiring exercises for girls. They can be as truly *artists* in the details of home life, as in their dress, or with the pencil.

A banker's half-invalid wife told me that she was driven to do her own work, even to the washing, and, said she, "I was infinitely better in *health* and *cheerfulness* for it; but a thousand might have told me so, and I would not have believed it." How many others are "as blind" to opportunities for health and pleasure just at their right hand. This woman made discovery, waking up her lifeless, muscular system, she brought, the health and cheerfulness doctor's art could give. Aye,

"That which makes us have no need of physic. That's physick, indeed."

"But, father, you know they have the regular gymnastics in the Seminary."

Yes, and that's a part of the *vice* of the system; they dull and tire from monotony; some of them are essentially unnatural, and the very character of method and drill makes them discipline, rather than recreation. We can not long beat the air for exercise and in the virtue of exercise in it, no more than we can love, or laugh; or frolic by rule.

Do you remember, Mary, the two young ladies we saw at B——? They had just graduated at a seminary of note, and so important did this event seem to them, that all subsequent events, even long-previous transpirings were dated from this epoch, so long before or after they graduated. They appeared to be well-trained in book music, and almost to affectation in the proprieties. They were girls of some true principles, as I saw, as I think, something of the absurdity of going fresh with academic honors into an institution for invalids. The mother was strong enough to lead about and be servant to her two daughters. These were dyspeptic and bloated their "sphere" *invalidism*. *Cui bono?* Not in dreaming, nor in thinking only, but in doing, and the power to do, are we to make chaos and to "inherit the earth." Here were learning and accomplishments, so called, and in getting, disuse and loss of the power to do, to enjoy them. They did not seem to have

vacuity, nature was schooled out of them. They went about exercise, not as though there were in it any element of play, but as though it were ecclesiastical, or judicial, or expiatory. They had no natural sense of fatigue or tiredness, therefore, no sound and refreshing sleep. They had, of course, no genuine sense of *hunger*, no true seasoning for our food. They would lie down in the morning with the *bouche close*, vile taste in the mouth, and look wist-

fully around for some sharp sauce, to quicken appetite, and end by saying, "I can't *eat*, every thing tastes so horribly."

Should that be called education, whatever the intellectual culture or accomplishments, which ends in impairing and perverting the powers and actions of the living body? Or is it in the power of the doctor to repair such loss? We answer to both these questions, *Ordinarily, NEVER!*

Castles on the Sands.

BY MRS. D. HARRY PRIME.

I WAITED for the morn to wake,
 I waited as in days gone by;
 But on my spirit only break
 The changing murmurs of a sigh.
 I waited, watched, as in that hour
 Of life's young golden fleecy dreams;
 When, in that vine-wreathed, shaded bower,
 I, foolish child, reveled in *seems*.

The moon-flecks kissed my wayward foot,
 And placed their gems within my hair;
 I spun the threads of fancy sweet,
 And wove them with a girlish prayer;
 Then trilled some happy roundelay
 As my fair castles came in view,
 Their turrets gilt by beams so gay
 Were, aye, so fair, and seemed so true!

Now moonbeams fondly kiss my hair,
 And linger loving at my feet;
 But where, alas! my youthful prayer?
 And where those domes on gilded street?
 Yes, one by one I've seen them fall;
 I've built them o'er and o'er again,
 But now they are demolished, all;
 Their *debris* brings its last dark pain.

We build our house upon the sands,
 And vainly hope a rock will form;
 The watery waste conceals no lands,
 'Tis only nest-work for a storm.
 The roar of hurrying, changing tides
 Shall be the requiem Fate will sing;
 The soul from body it divides,
 But Death gives back no vict'rious sting.

Statements as to the Duration of Human Life.

BY E. RAY LANKESTER, B. A., OXFORD.

HEBREW.

THE days of our years are three-score years and ten; and if by reason of strength they be four-score years, yet is their strength labor and sorrow: for it is soon cut off and we fly away.—*Psalms* xc: 10.

Yet his days shall be an hundred and twenty years. . . . There were giants in the earth in those days.—*Genesis* vi: 3, 4.

(The one hundred and twenty years is coupled with the account of giants. It was considered exceptional by the writer of *Genesis*.)

INDIVIDUAL OPINION.

When man has attained the age of forty or fifty he must know that he has reached half the term of his life.—*Cornaro* (Italian).

The man who does not die of disease reaches everywhere the age of ninety or a hundred years.—*Buffon* (French).

Man, being twenty years growing, lives five times twenty; that is to say, a hundred years.—*Flourens*.

CHINESE DIVISION OF LIFE. (SIR J. BOWRING.)

Age.	
10	is called Opening Degree.
20	is called Youth Expired.
30	is called Strength and Marriage.
40	is called Officially Apt.
50	is called Error Knowing.
60	is called Cycle Closing.
70	is called Rare Bird of Age.
80	is called Rusty Visage.
90	is called Delayed.
100	is called Age's Extremity.

FLOURENS'S DIVISION OF LIFE.

Age.	
1 to 10	is called Infancy.
10 to 20	is called Adolescence.
20 to 30	is called First Youth.
30 to 40	is called Second Youth.
40 to 55	is called First Manhood.
55 to 70	is called Second Manhood.
70 to 85	is called First Old Age.
85 to 100	is called Second and Last Old Age.

Others have divided age by periods of seven years. Dr. Farr, in the introduction to the

Census of 1851, quotes various such divisions and gives one of his own.

OLD MEN IN CHINA.

Relief was administered in the reign of K'anghi (1657) to 373,935 indigent old men in China from various provinces. The archives of the empire show that of this number the repeated ages were as follows:

70 to 80	194,086
80 to 90	169,832
90 to 100	9,996
100	21

SHORTNESS OF GERMAN LIVES.

Mr. Neison observes, in his "Contributions to Vital Statistics," that in the returns from the Gotha Life Office, "at the younger ages the mortality is much less than that indicated by any of the other tables yet alluded to (English); but at the older ages the rate of mortality is very much greater."

SHORTNESS OF AMERICAN LIVES.

Professor Gill has obtained returns from New York Assurances "showing the same peculiar features in the rate of mortality described as characteristic of the Gotha Company's experience, only at the older ages the mortality is even higher than that of the other."

The following paragraph from *The Lancet* has come to hand while these sheets are going through the press: "The American Philanthropic Society has received from Mr. Pliny Earle Chase an important contribution on the value of life in the town of Philadelphia. Mr. Chase shows that, notwithstanding the increased juvenile mortality, the Philadelphia life tables indicate a possible life in Philadelphia of one hundred and fourteen years, a probable life of fifty-three and a half years, and an expected life of nearly thirty-six years. He means by the term possible life, the limit sometimes attained in a given locality; by the probable life the age the probability of living beyond which is as great as that of dying before the age is attained; and by the expectation life he designates the average which will be attained by all who are born. In sixty-two years the average mortality was 1 in 47,836, the colored mortality

the same period being 1 in 27.763. The ratio of still-births to total births was 4.3 per cent., and to total deaths 5.8 per cent. The ratio of living births to population was 2.8 per cent., and of deaths to births, 74.5. The average natural increase was 3.3, and the increase by emigration 2.6 per cent. The main age at death was 23.67 years, and the main age of persons living was 24.29.

But the most interesting facts in Mr. Chase's tables are those which show how the simple mode of life of a Quaker community compares with the life of a more active, or, rather, more luxurious people. He analyzes the life tables of the two communities of Philadelphia, dividing them into Friends and Philadelphia, and finds, as his results, that the Friends at the age of twelve years have a maximum vitality of 20.49 per cent. over their neighbors; that from twenty to sixty years of age they have a proportionate mortality of 23.87 under their neighbors; that their expectation of life is 24.62 per cent. higher, their probable life 43.73 per cent. more valuable, and their proportionate mortality at birth 44.70 lower than the mortality of their neighbors.

The Quakers of Philadelphia approach thus toward the Jewish race in respect of vitality, in which they are, probably, exceptional to all other Christian communities."

SAVAGES.

Fuegians and other very degraded races are stated rarely to exceed the age of forty-five, being killed and eaten in some cases by their children.

VARIOUS OCCUPATIONS.

The following table, by Guy, gives the average age of persons of various occupations dying at fifty-one and upward. (This quantity must be carefully distinguished from "the expectation of life" at the age of fifty-one, given in future tables. The "expectation" tables are framed on more extensive data, and indicate the probable after lifetime at a given age; hence they can only be compared *inter se*, and not with the above.

England, males (Farr).....	75.6
Clergy.....	74.04
Gentry.....	74
Medical men.....	72.95
Lawyers.....	72.78
Navy.....	72.62
Trade and Commerce.....	72.32
Literature and Science (English)....	72.10
Aristocracy.....	71.69

Army.....	71.58
Literature and Science (Foreign)....	71.44
Fine Arts.....	71.15
Painters (Bell).....	70.96
Chemists (Thomson).....	69.51
English Literature (Chambers).....	69.14
Male members of Royal Houses.....	68.54
Sovereigns of all countries.....	64.19
Kings of England.....	61.12

England, females (Farr).....	76.58
Upper class females.....	76.66
Females of Royal Houses.....	69.11

SOVEREIGNS.

This table exhibits the average age at death of Sovereigns of various races dying at fifty-one and upward.—Guy.

Emperors of Rome.....	70.18
Moor of Spain.....	68
Caliphs of Bagdad, Egypt, etc.....	76.8
Eastern Emperors (Roman).....	66.82
Kings of Spain.....	66.88
Kings of Bohemia.....	65.16
Kings of Bavaria.....	65.24
Kings of Sicily.....	64.42
Kings of England.....	64.12
Kings of Saxony.....	63.83
Kings of Portugal.....	63.63
Kings of Savoy.....	62.62
Csars of Russia.....	61.90
Kings of Sweden.....	61.75
Kings of Hungary.....	61
Kings of Denmark.....	60.82
Kings of Poland.....	60.73
Emperors of China and Japan.....	60.4
Western Emperors (Rome).....	60.20
Kings of Wurtemberg.....	59.66
Sultans of Turkey.....	59.30
Kings of France.....	59.26
Kings of Scotland.....	57.33

N. B.—It is noticeable that the hereditary princes are less long-lived than those who have won their position by some merit, either military or administrative.

COMPARISON

Of ages at death, of three centuries. From Guy, in Journal of Statistics.

16th century 1500 facts gave mean of....	64.25
17th century 3400 facts gave mean of....	60.36
18th century 2800 facts gave mean of....	63.41

COMPARATIVE LONGEVITY OF MARRIED AND UNMARRIED.

Number of married persons gave mean of	66.77
Number unmarried persons gave mean of	62

STUDIES IN HYGIENE.

REST.—There comes a time in a man's life when he looks out for pauses and periods of rest. There is a time when a man is overflowing with energy. He both finds work and makes work. He cuts down trees in the forest of difficulty. He fights with windmills. He sketches out a programme which it would take several lifetimes to encompass. He puts no limit to his energies or his range of possibilities. By-and-by a man finds that his sphere is strictly limited and defined. He seeks to curtail rather than extend his engagements. He no longer thinks that he can know every body and go everywhere, but recognizes that in fact he can, comparatively, only know few persons and go to a few places. He understands small economies of time and circumstances. He appreciates the *laissez faire*. He has a growing opinion in favor of holidays. Instead of being always busy, he appreciates pauses from business. He studies to be quiet. He begins to think that speech is silvern and silence is golden. He appreciates rest. He appreciates rest if it is only for the sake of work, according to the laws of action and reaction. Hence, if you can economize seasons of rest you secure opportunities of work. In New York every man seems in a hurry, and every man has his programme too full. You note the New Yorker's short, quick and somewhat impatient walk. If he goes out to dinner, he has been working up to the last minute; at a place of amusement he is too thoroughly tired to enjoy himself; even on a holiday he is busy with his schemes of work. A man can do no justice to dinner, holiday, or concert when his most pressing need is that he should lie upon a sofa or go to bed. Hence come nervousness, indigestion, bad nights, fatty degeneration, and all kind of horrors. I remonstrated with a man the other day on his childishness in stopping to look at the shop windows. He might have answered, that to look at the shop windows was itself part of a liberal education. But he told me that he was in the habit of walking a great deal too fast, and consequently he would every now and then bring himself to anchor in front of a shop window, and counted the rest as gain. The taste for rest grows with our growth in wisdom. A child can not understand it. When a child is

told that his father or mother wants to be quiet the sentence is a wonderment to him. Mrs. Schimmelpennick says that when she was a child of six, her parents taught her to fold her hands and be quiet for half an hour. This valuable art might be taught at our schools, even if charged for as an extra. The taste for quiet and thoughtfulness ought to be developed as much as any other taste. Rest is an investment for action. It is also rather a true element in good workmanship. An editor once told me that though his town contributors sent him the brightest papers, he always detected a peculiar mellowness and finish about the men who wrote in the country. I knew an important Crown official, whose hours were from 10 to 3. He had to sign his name to papers; and as a great deal depended upon his signature, he was very cautious and chary how he gave it. After 3 o'clock struck, no beseeching powers of suitors or solicitors could induce him to do a stroke of work. He would not contaminate the quality of his work by doing too much of it. He would not impair his rest by continuing his work. And so he fulfilled the duties of his office for exactly fifty years before he retired on full pay from the service of his country. And when impatient people blame lawyers for being slow, and offices for closing punctually, and shops for shutting early and, generally speaking, the wider adaptations of our day to periods of holiday and rest, they should recollect that these things are the lessons of experience and the philosophy of society and life.—*English Paper.*

SUNBATHS.—These baths should be taken with care at first, say from ten to fifteen minutes at a time, and gradually increased until there be exposure from twenty to sixty minutes, but never so long as to be followed by a burning sensation on any part of the body. Of course, the stronger the patient, and the greater the effect desired, the longer they should be continued. If the patient be weak, and a powerful action be not desirable, the body may be lightly covered with white clothing, and the person sit or lie in the sunshine for hours if the heat be not great. Care should always be taken to avoid debilitation or prostration, which

ill result from long exposure to great heat. All parts of the body should be exposed alternately, turned to the light. These baths may be taken daily when the heat is not too great, but never either immediately before or after a meal. Semi or tri-weekly in mid-summer will be all sufficient. The head may be kept cool by putting a wet cloth on it, and if there be nausea, a glass of cold water may be taken.—*R. Walter, M.D.*

HYGIENE AND ALCOHOL.—Twenty-six men were once traveling over a Western plain. The weather was very cold, and they were obliged to camp at night, with food but no fire. They also had plenty of whisky. One of the number was a physician, and before the men retired he delivered the following speech:

"As we can't get wood, boys, we must keep warm, or at least alive, through the powers of *vis medicatrix Naturæ*. She is all right in any weather, if we don't clog her up and weaken her forces. If I have got any medical knowledge at all, I am going to use it to-night, and the first thing I begin with is this: I am fond of whisky as any man dare be; but, by the gods, the man that gets drunk to-night to sleep warm won't see daylight. When the great God of the Universe made man the boss workman of the earth, he made all other things first, and the elements, too, not to rule over him and kill him, but to hunker down to his wants. Well, boys, whisky was scored out of that bill of fare. The *vis medicatrix naturæ* is the highest of all other things, and if she ain't splintered by our own folly she will ride safely through any storm. We have got to keep stirring round and huddle up in the straw of the wagons, as any of us as can cram in together. Each one must keep the other warm. We must all eat as much as possible, but whisky ain't the thing.' This is what I told them all, but very few heeded me. I didn't taste a drop, nor did Carnor Finley. We then huddled in together under the straw in the bottom of our wagon. We took off our boots and overcoats, and then got the straw and put our blankets over us, and our overcoats on the top of them. We were very cold, but did not suffer or freeze. Clark, Kelly and Tanner were very cold, and we heard them yelling nearly all night. They suffered very much, but were not frozen; they drank very little whisky, but they took several *thin* drinks in the run of the night. Seven other fellows, that drank a good deal, had their toes

and fingers scorched, but they got over it in a few weeks. Six of the boys that drank pretty strong were badly frozen, and never got over it; and four that got very *boozy* were frozen so badly that they died three or four weeks afterward. But Hutchinson, M'Elroy, and M'Alpin were stiff dead by daylight. They got dead drunk, and as they did not make a fuss, the other boys thought the whisky was keeping out the cold, so they drank the stronger. I tell you, sir, they all suffered just according as they took in the whisky; those that got drunk froze dead; those that drank less, but too much, died after a while; those that drank only moderately will feel it as long as they live, and those that took only thin drinks were well nigh shut up. We three didn't drink any. The *vis medicatrix naturæ* brought us through. These men were all Americans; their ages ranged from 23 (M'Alpin), the youngest, to 31 (Carter), the oldest of the group. All were equally well provided, each having two blankets. All were in the bloom of life, in the best of health, and ready to encounter, and able to overcome the hardships inseparable from a frontier life."

RICE AND MILK AND HARD WORK.—A health reformer was told that he could not keep up with the crew of men through haying on his "sick folks' baby diet." He replied, that he could go through the two weeks of haying on *rice and milk* and endure the labor as well as any man in the crew. The whole company ridiculed him.

"They laughed, 'twas well; but the rule applied. Soon made them laugh on the other side."

He went through the entire haying season with only rice and milk for nourishment, and to the astonishment of all, did more work and endured it better than any other man in the company. They had supposed that rice contained but little nourishment, was suitable only for sick people, students, etc., but were surprised to learn that there is on earth but one other article of food (oat-meal) containing more nourishment to the pound than rice.—*M. E. Cernell.*

FORESTS.—The disappearance of our forests and the growing scarcity of trees being of such deleterious effect upon our climate, soil, and sanitary conditions, has been elaborately referred to by us in former issues, and we are pleased to note that a suggestion made in our pages is to be carried out by the Lake Shore and Michigan Southern railroad; which will

plant chestnut trees on each side of the track of its new branch to Grand Rapids. The railroad companies have a special incentive to such planting in the fact that the trees will pleasantly shade the track in summer, shield it from snow-drift in winter, to say nothing of possible mitigation of atmospheric effects upon the iron, according to recent chemical developments.—*Exchange.*

OVERWORK.—An idea has taken hold of the public mind that overwork is killing a great many business and public men, which we are convinced is without any good foundation. The overwork meant is hard brain-work, not hard physical labor, though it is the latter that is more likely to shorten life than the former. You will rarely find an old man among miners, sailors or other very laborious callings; but statesmen like Wellington or Palmerston, who sit up at nights in Parliament, and have all the affairs of the great nation on their minds, are often very long-lived. Clergymen, who are a very hard-worked class, so far as mental labor is concerned, are also generally long-lived, and so are judges, and especially chief justices, whose minds must be almost constantly on the stretch. The greatest workers in preaching or writing, such as Calvin, Wesley, Lyman Beecher, Albert Barnes, etc., often attain a great age. It is not, therefore, great mental labor, even though accompanied by a good deal of bodily labor, that shortens life, but rather the anxiety, excitement, and worry of gambling, in business or politics, and the free use of stimulants, that are the real causes of most of the sudden deaths which are credited to over-brain work. Let a man keep calm, abstain from stimulants and narcotics, take sufficient wholesome food, moderate exercise, and sound sleep, and he can probably work with energy year in and year out to the allotted period of man's active life, namely, three score and ten years.—*New York Witness.*

SUMMER DRINKS.—The summer season is sure to flood saloons and liquor-stalls with a vast variety of drinks whose base is alcohol. The evil spirit of rum assumes more aliases than any other spirit of mischief. Unscrupulous dealers in soda give it soft names, cover it with cream, and crown it with foam. The manufacturers of cheap lollipop are not contented with the sickening swill which they sell by the glass, but they must impregnate the nasty stuff with poison, so that it will burn as well as bubble. Temperance men and women should give a

broad margin to all who make and sell those unwholesome and dangerous compounds. Many cases of sickness, not to mention drunkenness, can be traced directly to the use of these so-called summer beverages. Not a few reformers, men, who would turn with "fear and trembling" from the bar where intoxicating liquors are sold, will venture to taste "hock" soda and similar intoxicants, and find, to their sorrow and shame, that the devil baits his hook in the drug store, and at the soda-fountain, as well as the dram-shop. We ask the authorities if these dealers in stimulating syrups have a legal right to do so without a license?—*National Temperance Advocate.*

THE UNCERTAINTY OF LIFE.—Professor De Morgan once remarked that before an individual was born, it was twenty chances to one against his dying at a given age of a given malady;—and this still is and ever must remain true. The recognition of the fact that all must die constitutes the boundary of our knowledge as to the individual catastrophe; and it is wisely ordained that it should be so. But scientific investigation, aided by and based upon well-founded records of the deaths of several centuries, has led to the discovery of a series of facts connected not only with the masses of the people, but with the various sections of the mass, which not only astonish us by the minuteness of their details, but astound us with their marvellous accuracy.

By such means it becomes known that a clergyman who has attained thirty years of age has an expectation of thirty-five more; that an agriculturist of the same age has an expectation of forty years; while a sovereign can claim no more than twenty-two or twenty-three years. This last fact calls to mind an observation of Hufeland, that while royalty confers upon its possessors all the advantages and enjoyments of the world in the highest degree, it does not, as a rule, confer on them that which is to be esteemed as greater than all—the blessing of long life.—*N. Y. Observer.*

IS THERE ANY PURE WATER?—We are invaded with dirt, not only in the air we breathe, but also in the water we drink. As Professor Tyndall quaintly puts it: "Here, for instance, is a bottle of water, intended to quench the lecturer's thirst, and it would be well for the lecturer not to scrutinize it too closely. In track of the beam of electric light sent through, it simply reveals itself as dirty water." He then goes on to say that the most careful filtering, and

ough charcoal or silicated carbon, is useless intercept the number of particles wholly beyond the range of the microscope. A glass of d, sparkling water is a luxury on a hot, dry day; but, we fear, many of us will be sadly out of conceit with the filtered water when we are told that it is next to impossible, by artificial means, to produce pure water. The purest water that can be obtained probably from melted ice; but even this, from contact of the ice with mote-filled air, is not absolutely pure. The water of the Lake of Geneva is, according to the Professor, remarkable for its purity.—*Once a Week*.

HYGIENE vs. DRUGS.—The most enlightened physicians are fast losing their faith in the efficacy of drugs. These, in themselves, an experienced doctor has said, may always be regarded as evils. Even when they do good, which is rarely the case, the benefit is never accompanied by a certain injury, and the former is to be measured only by its preponderance over the latter.

Sir Astley Cooper is reported to have said of drugs, even in the hands of the physician, "re upon the whole done more harm than good, and all judicious practitioners of medicine are now using them less profusely than once the practice. "I firmly believe," says Dr. Holmes, "that if the whole materia medica, as now used, could be sunk to the bottom of the sea it would be all the better for mankind—and all the worse for the fishes."

If the drugs were thus disposed of, those who believe that all the art of medicine consists in the use of them would doubtless think that its professors might as well drown themselves in the same sea with their *materia medica*. The tors, however, can not be spared, though in pills, boluses, powders, and draughts may be wanted, with all their science and devotion to labor, to study the diseases which afflict humanity, and having discovered their causes, to do their best to remove them. The professional public can also do a great deal for themselves, by acquiring a knowledge of the causes of health, and acting in obedience to them. They will thus soon learn that disease is the inevitable penalty of disobedience, and that it is in the power of pill or powder, or any other means to mitigate or abolish their punishment.—*Pepper's Bazar*.

The more people study hygiene the less will they be to swallow poisons. The latter kill, the former makes alive.

HYGIENE OF THE AX.—Horace Greeley in his description of his habits of life, gives an interesting account of the happiness he experienced, and the benefit he derived, from taking his ax and trimming the trees of his wood lot, and exercising his muscles with this useful implement. It is said also of the celebrated Archbishop Whately that he was often seen, ax in hand, working off nervousness and indigestion. Instances of this kind might be multiplied, where men of common sense have acted upon this principle, and with benefit to themselves. The principle is generally recognized that health and strength of mind depends much upon health and strength of body. These can not be maintained without proper exercise. These being established principles, would it not be well to act in reference to them, and from a settled principle of action, which would call into proper healthful activity the different powers of the system?—*Geo. I. Butler*.

FATIGUE.—In order to understand the influence of an irregular expenditure of force, we need only to remember that when greatly fatigued we lose our appetite, and that when the stomach is full of activity the limbs are indisposed for performing hard work. Insufficient nourishment and fatiguing work, during the period of growth, stop the corporeal development of the individual.—*Liebig*.

Parents should be careful not to work their children *too hard*. On the other hand they should not let them be entirely idle. Use judgment in the matter.

HUMOR.—"My lord," said the foreman of an Irish jury, when giving in the verdict, "we find the man who stole the horse not guilty."

During a fine starlight evening lately a three-year-old philosopher, after a silent and apparently profound scrutiny of the heavens, asked his mother, abruptly, where the stars came from. Mamma replied: "I don't know, Willie; I don't know where the stars come from." "Well, you bet I do. *The moon laid 'em*."

A little boy having broken his rocking-horse the day it was bought, his mother began to rebuke him, and to threaten to box his ears. He silenced her by inquiring, "What is the use of a good horse t'n it's broke?"

"Where's your filial gratitude, you naughty boy? What would you have been without your kind father and mother?" "I s'pose as how I'd been an orphan, sir."

RECIPES FOR WHOLESOME COOKING.

PUDDINGS--Continued.

No. 4. BOILED APPLE PUDDING.—Half

a pound of apples; half a pound of bread-crums; half a pound of currants; six ounces of sugar; two eggs, and the grated rind of a lemon. Chop the apple small; add the bread-crums, currants, sugar, and lemon-peel, then the eggs, well beaten; boil it three hours, in a buttered mold or basin, and serve with sweet sauce.

No. 5. BOILED ARROWROOT PUDDING.—

Take two ounces of arrowroot; one pint of milk; and two eggs. Set the milk on the fire; take out a few spoonfuls; and mix with the arrowroot; when the milk is nearly boiling, pour it gently upon the arrowroot, stirring it all the time; return it into the pan, and set it on a moderate fire, stirring it well for a few minutes till it thickens; when nearly cold add the eggs, well beaten, and a little salt; boil it an hour in a buttered basin, and serve with or without butter sauce and currant jelly.

No. 6. APPLE AND BREAD PUDDING.—

Take three-fourths of a pound of bread crumbs, one and a half pounds of apples, sugar, and butter. Pare and cut the apples as for a pie; put a little butter into a deep dish; then a layer of apples with a little sugar; then a thick layer of bread crumbs; then another layer of apples and sugar and bread crumbs. Lay a few small pieces of butter on the top, and bake it in a moderately hot oven. Cooked rice is a good substitute for bread crumbs.

No. 7. BATTER PUDDING.—Take a half

pound of flour; one pint of milk; two eggs; one salt-spoonful of salt, and one tea-spoonful of baking powder. Rub the baking powder quite smooth, mix it well with the flour, then stir in nearly half of the milk with the salt; beat it perfectly smooth, add the remainder of the milk and the eggs, well beaten; boil the pudding one and a half hours, in a buttered basin, and serve with sweet sauce; or melt some butter in a dish, and bake it in a quick oven.

No. 8. BARLEY PUDDING.—Prepare

a half pound of pearl barley; one quart of new milk, and six ounces of sugar. Put the barley in fresh water, and let it steep twelve hours; pour the water from it, add the milk, sugar, and a small salt-spoonful of salt, and bake it in a slow oven. If a richer pudding be required, take it out of the oven when nearly done, stir in two ounces of butter, four well beaten eggs, a little almond flavor, or any other seasoning; return it to the oven in a buttered dish, and bake it one hour.

No. 9. BAKED BATTER PUDDING WITH

FRUIT.—Take a half pound of flour, one pint of milk, the yolks of four, and whites of two eggs; half a tea-spoonful of baking powder, and one tea-spoonful of salt. Rub the powder till smooth, mixing it well with the flour, adding the salt, and as much milk as will make it a stiff batter; beat it till quite smooth, then add the remainder of the milk, and the eggs, well beaten. Put some apples, cut as for a pie, into a buttered dish; pour the batter over,

and bake in a moderately hot oven. Damsons, currants, gooseberries, or rhubarb, may be used in the same way.

No. 10. BREAD PUDDING.—Three

ounces of fine bread-crums; two ounces of butter; two ounces of white sugar; three eggs; the rind of a lemon; and one pint of cream or new milk. Put the butter in a basin with the sugar (pounded), and the grated rind of a lemon; pour in the boiling milk, or cream, stirring it properly mixed, when nearly cold, add the bread-crums, the eggs, well beaten, and a few drops of almond-flavor. Mix the whole together, and bake it in a buttered dish, in a moderate oven.

No. 11. COMMON BREAD PUDDING.—

One quart of milk; three eggs, and bread. Pour a quart of boiling milk on as much bread (with the crust), cut in small pieces, as will absorb it; cover it with a plate, and let it remain till cool. Mash the bread, and add the eggs, well beaten; when well mixed, put it in a wet cloth, floured; boil it an hour and a half, and serve with sweet sauce.

No. 12. BREAD PUDDING WITHOUT MILK

on EGGS.—Take one pound of stale bread; a half pound of currants; a quarter pound of sugar, and one tea-spoonful of ginger. Pour boiling water on the bread, and when cool and properly soaked, press out the water, and mash the bread, adding the sugar, currants, ginger, a little salt, and grated nutmeg; mix the whole well together; put it in a buttered dish, laying a few small pieces of butter on the top, and bake in a moderate oven; when baked, let it remain a few minutes; then turn it out on a flat dish, and serve either hot or cold.

No. 13. BIRD'S NEST PUDDING.—Peel

and core with a scoop enough apples to cover the bottom of your dish; fill the holes of the apples with sugar, and sprinkle one ounce over them; add a quarter pound of sage, a little lemon peel and nutmeg; cover the whole with water, and bake it in a quick oven for about an hour. Eaten hot, let it stand five minutes after being taken out of the oven. It is very nice cold.

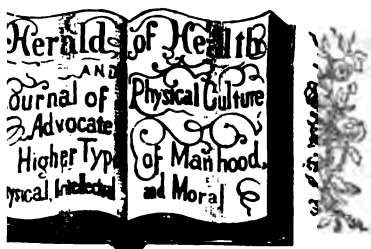
No. 14. CARROT PUDDING.—Take a

half pound of grated carrot; one pint of new milk; a quarter pound of soda biscuits; three ounces of sugar, and half a small tea-spoonful of powdered cinnamon. Wash and scrape the carrots very clean; grate them into half of the milk, cold; boil the other half pint of milk, and pour it upon the biscuits, broken in small pieces, cover it with a plate, and when cool, mix well with the carrot and milk, adding the sugar and cinnamon, and bake in a buttered dish in a moderate oven.

No. 15. CARROT PUDDING.—Take a

half pound of grated carrot; a half pound of bread crumbs; one pint of new milk; half a pint of cream; six eggs; four ounces of sugar, and two ounces of butter. Wash and scrape the carrots very clean; grate them quite fine; mix the pulp with the bread crumbs, sugar, nutmeg, or mace, and a little salt; add the eggs, well beaten, and bake it in puff paste, in a moderate oven.

EDITORIAL DEPARTMENT.



NEW YORK, SEPTEMBER, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as unduly
of any article which may appear in THE HERALD.
will allow the largest liberty of expression, believing
to doing this magazine will prove to be more useful
dearable to its patrons.

Exchanges are at liberty to copy from this magazine
giving due credit to THE HERALD OF HEALTH AND
OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

HOW THEY TREAT AMERICAN WOMEN
AND STUDENTS IN GERMANY—A LESSON
FOR US.—

A LETTER FROM DR. MARY SAFFORD.

16 TAUBENHEIM STRASSE, BRESLAU, Germany, }
July 30, 1871.

DR. HOLBROOK—What mystic hand
was instrumental in placing the generous
of "HERALDS OF HEALTH" upon my table
do not know; but I do know that they
met with a hearty welcome, and that
my books have been laid aside to greet
interest and pleasure thoughts of those
I have so long known through their
writings, that I now claim them as friends.

I have looked in vain for "Aunt Fanny's"
pen tracks, but I hope it has not ceased to
run. As my eye, too, glanced along among
the General Articles and the Editorial Depart-
ment, I have been enticed to sever leaf after
leaf, and as I have read this article and that,
each so instructive and suggestive, a dozen
German friends, at least, have been thought of
who must have the benefit of reading them, too.
They may prove the seed dropped upon good soil
that shall take root, and have an influence in
turning more attention to thoughts upon Hy-
gienic subjects in general, which in many re-
spects is as much needed here as in America.
As far as I have been able to judge, and I have
had no little experience in Vienna and here, I
think the food of the well-to-do people much
better selected and prepared than with the cor-
responding class with us. Although it has
been proven satisfactorily, to scientists at least,
that from Liebig's prepared extract, through
all of the varied forms of soup made of meat,
they do not really contain a principle of
nourishment, but act only as a stimulus like
theine, but one soon learns here to accustom
himself to them, and to consider them a very
agreeable forerunner to a substantial meal, es-
pecially when prepared so palatably as is usually
the case.

One forgets in this country that such an
abomination exists in the civilized world as hot
bread in any form. Your little biscuit, *semmel*,
comes to you fresh for breakfast, never hot,
with a brown, crispy external, and with a light
center. For dinner and supper, light rye bread,
baked in large loaves in the country, in ovens
like our olden-timed New England ones, is
mostly used in this part of Germany. The pest
of pastry that infests American tables is quite
unknown.

Before I was so fortunate as to be taken into
a charming home circle, I took my meals at

Anatomy I have had a like experience. I dissected with a promiscuous class, and I not only been present, but have assisted Professor in making several operations in private practice, upon both men and women, in all my experience I have never encountered vulgarity in speech nor act.

You will, I feel sure, rejoice with me, when I think of the golden opportunities I enjoy in my private office of a noted gynecologist here, besides having an immense private practice, has a very large polyclinic for the poor. It has permitted me to make several important operations, and to-day I have made one on laparotomy, which, you know, is the most difficult as well as dangerous of all operations. I received the warm congratulations of the physicians who assisted me, and from Dr. F., who gave me the operation to make, the cheering assurance that no one could have done it better.

Very truly yours,

MARY SAFFORD.

THE EXERCISER.—In the Movement-Rooms of the Health Institute, at 15 West Street, for over two years has been used a curious piece of machinery, called the Exerciser, which has always been the wonder and delight of patients and visitors, and which has been so perfected that we think the out-world ought to know about it. The object of the machine is to give some of the most important applications of the Movement-Cure which can not well be made by hand. With it a patient can be exercised from head to foot in a pleasant and agreeable manner, without expending his own strength to do it, and refreshed instead of exhausted at the end of treatment. By taking hold of the handles, in any position, the hands and arms can be exercised by rapid vibrations, so that the blood will flow to them and produce a delightful glow. Feet and legs can be treated in the same manner. The same form of exercise can be applied to any part of the body; the liver can be exercised so as to remove torpidity; the lungs can be exercised so as to remove con-

stipation; in short, kneading, vibrations, rubbing, etc., etc., can be applied to the body in such a variety of ways as to produce most important physiological changes in a very short time, soothing disordered nervous action, promoting the circulation in organs where it is deficient, relieving congestions, promoting absorption, secretion, nutrition, and strengthening weak muscles to almost any required extent. In the treatment of dyspepsia, liver complaint, defective circulation, constipation, headache, coldness of extremities, chronic rheumatism, paralysis, and chronic diseases generally, it has great value. It is the invention of Dr. A. L. Wood, Physician to the Institute.

DEATH OF PHOEBE CARY.—Our readers will not need that we should tell them of the death of another of our contributors, Phoebe Cary. It is only a few months since we announced the death of her sister Alice. The general belief is that her grief for this sister had much to do with her illness. Their lives seemed almost one to those who knew them. Both sisters had been contributors to *THE HERALD OF HEALTH* for many years, and our readers will miss their sweet songs. They seemed to take great pleasure in writing for our magazine, and always adapted their poems to its needs, and more than once expressed their pleasure because they were enrolled among our contributors. The last poem written for us by Phoebe was printed in the June number. Those who will turn to it will find her words almost a prophecy of her death, as, for instance, the following verse:

"The mists and the shadows of morning are
done;

I am come to the side that is nearest the sun;
And the hills of that country are almost in
sight,

Where beyond the last shadow is nothing but
light."

But we will not mourn her loss, for we know that she is with her sister, singing sweeter songs than any that can be written on this side of the tomb.

object to advertise any. Our motive is, in view of the immense amount of malice there has been, to lay down a rational method of electrical treatment to assist Hygienic Physicians to combat more rapidly some of the most stubborn forms of disease. We commence with one of the most painful—Inflammatory Rheumatism. The operator will need a Galvanic Electro-magnetic machine for this. If it is provided with different tensions, he will use the same, wet sponges being attached to the connecting wires or cords.

Should the affection be in the knee-joint, place a sensitive sponge upon the most sensitive portion of the lesion, and the negative opposite, treating directly through it. Use as strong a current as can be comfortably borne, and continue it as fast as the patient can bear it; continue this twenty minutes, and if the attack persists, longer, even double the time, till the patient is relieved somewhat; then place the positive pole at the foot, with foot in warm water usually, and manipulate with the positive current over the limb, from the knee down, but always upon the sorest portion: time, ten minutes.

Repeat the treatment daily, or semi-daily, according to severity, till relieved entirely. Should the attack be in the ankle, the same method is indicated; if in the elbow or wrist, same, substituting the hand for the foot. If in the shoulder, place the negative pole at the base of the spine, and manipulate with the positive current; finally, place the negative in the hand and run it off that way.

Should the attack be in the hip (here care should be taken not to confound it with sciatica, which needs reverse treatment,) first seat the patient on the negative sponge, and treat over the hip with the positive; lastly, place the feet in water with the negative pole, and continue ten minutes longer.

Should there be a general febrile condition accompanying the attack, first seat the patient on the negative sponge, and pass the positive current several times down the whole length of the spinal column with as strong a current as can be borne; then reduce it, and treat all over the

trunk ten minutes; then place the feet in the water with the negative, and go over the legs five minutes longer.

From one to five treatments is generally sufficient to dispel an attack of inflammatory rheumatism. Of the cause of this disease, and how to remove it, we shall speak under the head of Chronic Rheumatism.—*A. J. Cook.*

HOW TO CURE STAMMERING.—Lute A. Taylor, editor of *The La Crosse (Wis.) Leader*, who has been an inveterate stammerer, writes as follows about the way to cure the habit: "No stammering person ever found any difficulty in singing." The reason of this is, that by observing the measure of the music—by keeping time—the organs of speech are kept in such position that enunciation is easy. Apply the same rule to reading or speech, and the same result will follow. Let the stammerer take a sentence, say, this one, "Leander swam the Hellespont," and pronounce it by syllables, scan it, keeping time with his finger, if necessary, letting each syllable occupy the same time, thus Le—an—der—swam—the—Hel—les—pont, and he will not stammer. Let him pronounce slowly at first, then faster, but still keeping time with words instead of syllables, and he will be surprised to find that, by very little practice, he will read without stammering, and nearly as rapidly as persons ordinarily talk or read. Then practice this in reading and conversation until the habit is broken up.

NEW PREMIUMS FOR 1872.—We call especial attention to some new premiums offered on another page for *THE HERALD OF HEALTH* for 1872. Those who send in names now, will get the October, November and December numbers free. Where each subscriber gets a premium worth a dollar and a half, it will be very easy to get names. Let the work begin at once. We promise, if possible, to make our magazine better and better each year, and ask our subscribers to do their share toward giving it a very wide circulation.

removed, as the first and most important toward a cure. There is one thing, however, which will be found of benefit, whatever may be the cause, and that is to bathe the feet daily in cool or cold water, following up with thorough rubbing, kneading, and massage. The rubbing, etc., may be repeated several times a day.

High-Heeled Boots.—The following from *The Pacific Medical and Surgical Journal* is too good to pass unheeded :

It is worthy of note that while a maligned and hated of Chinese, individually, is forced under cover of hostility to their immigration, our females have fallen in love with these costumes and customs, in some respects, and accepted them as models. The picture of Chinese ladies, to which one has been accustomed for many years, bear a close resemblance to the American belle of the present day.

The repulsive hump, the crippled feet, the mincing gait of our women, if they do not fortify the Darwinian theory of the origin of the species from monkeys, at least give the appearance of retrograding monkey-wards. The dress, uncouth and deforming as it is, does not of itself deserve notice, but the high-heeled shoe, crippling the feet and distorting the body, are an outrage on grace, on anatomy, on propriety, entitling the authors, could they be named, to criminal responsibility. A confession of corn-doctors, in the interest of their pockets, could not devise a better scheme for the times. Women whose pedals are solidified by escape with corns, of which we hope to pray they may have a full and a tender.

But that a whole generation of little girls should have their toes jammed into the forepart of their boots, to do the work of heels, that their legs should be thrown out of natural balance, and the pliant bones bent into semi-circles, is a sacrifice to fashion which disgraces a nation of Hottentots. Should the fabled custom hold a few years, there will be no decent foot or an esthetic leg in our population, except among washerwomen and the like. And all this is a trifle compared with the mischief done to the pelvis, the chest, by the constrained attitude of the abnormal elevation of the heel must necessarily induce. Fashion is at best a cruel mistress; but the whole history of her capricious

rule does not exhibit a grosser violation of natural laws, and a more unpardonable assault on the beauty and health of woman, than the invention of HIGH-HEELED BOOTS."

Fever and Ague and Quinine.—

"I have been troubled with the ague for several weeks. Please give in the next number of your *HERALD OF HEALTH* your treatment of this disease. I have been using quinine. Has quinine an injurious or beneficial influence upon persons?"

An answer to this will be found in the May number of *THE HERALD OF HEALTH* for this year, page 232. Quinine often checks the chills of fever and ague, but does not cure the disease. The philosophy of its effect is this : the system becomes filled with the malarious poison, and makes an effort to throw it off, and this effort is known as a chill. Quinine breaks the chills, or remedial efforts, for the time being, but leaves the malarious poison still in the system. The true method of treatment is to eliminate the poison from the system, when the chills will cease, instead of introducing other poisons, which check the efforts of the system to throw off the cause of the disease. More enlarged livers and spleens and shattered constitutions are caused by the use of quinine than by the fever and ague itself, hence of the two evils, the remedy is worse than the disease.

Since writing the above, a physician from a section of the West where the fever and ague is very prevalent, told me that the people there after being repeatedly cured (?) of the disease by quinine for four or five years, at last came to have it constantly, in spite of all the quinine they could take, and continued to have it until they rested quietly in their graves.

Meat for Dyspeptics.—"Ought a dyspeptic, who has been accustomed to meat, to abandon it altogether?"

As a rule, dyspeptics seem to do better without meat than with, when they are supplied with plain, wholesome food, suitable to their condition. There are many exceptions, however, to this rule.

WHAT maintains one vice would bring up two children.

NOTICES OF NEW PUBLICATIONS.

IS ALCOHOL A NECESSITY OF LIFE? By HENRY MUNROE, M. D., F. L. S., Lecturer on Medical Jurisprudence and Histology at the Hull and East-Riding School of Medicine. New York: National Temperance Society. Price 15 cents.

In this essay Dr. Munroe takes high ground in favor of the non-use of alcohol in any form, even the lightest beers and wines as a beverage or a medicine. In regard to the use of alcoholic drinks as a beverage in health, we presume there are few, whatever their practice, but acknowledge their uselessness, at least, but the number is far less who are convinced they are not valuable at some time as a medicine, though the number of physicians who do not prescribe them for the sick is constantly increasing. In regard to this point, Dr. Munroe says: "It is now seven years since I have ordered any alcoholic drink as a medicine or diet; and the success attendant upon its disuse in cases where in former years I would have ordered it, and condemned myself if I had not done so, is so gratifying as to lead me to its entire abandonment in the treatment of disease. In typhoid fever, as well as in other cases of the worst character, in cholera, in sudden and violent hemorrhages, in delirium tremens, in rheumatism, in gout, and in many other diseases, the success of this treatment without the use of alcohol has been most marked and satisfactory." The same pamphlet also contains an Essay on The Medical Use of Alcoholic Drinks, by T. A. Smith, a Chemist of London, in which we find this sentence, "I can not help thinking that if the fatal consequences of alcoholic medication were duly considered, the practice of advising the sick to take wine or beer would be given up, and more rational and efficient remedies would be employed."

We commend the little tract as one fit to be spread broadcast everywhere.

The same house also sends us No. 5 of The Temperance sermons, by Rev. J. P. Newman, D. D.

THE ACTION OF NATURAL SELECTION ON MAN. By ALFRED RUSSELL WALLACE. New Haven: C. C. Chatfield & Co.

This is the sixth of the University Series from this enterprising house, which believes in small books instead of large ones, judging by its practice. In it Mr. Wallace, an English Naturalist, endeavors to harmonize the two conflicting parties that hold such diverse theories as to Man's origin. Man's superior intellect, he contends, has placed him mainly above and beyond the law of "Natural Selection," to which animals are subject. He is able to clothe himself, thus making it unnecessary that he should perish in cold weather; he cultivates the soil and prevents a scarcity of food which otherwise would starve him; he sympathizes with the weak and helpless; shares his food with the hungry; binds up the wounded; and saves the lives of the sick from death; and thus the power that leads to the rigid destruction of all animals who can not help themselves, is prevented from acting on him.

Nor does he believe that the fittest, always, or even generally, succeed best, but contends that the mediocre, if not the low, both as regards mortality and intelligence, succeed best and multiply fastest. Thus, however, is

owing to an abnormal condition of society which will always exist. Too much science, he contends, has been given to a world low in morality, and it has been as well as a blessing. He thinks progress is not due to the survival of the fittest, as to those qualities which raise man above the animal, and which ally us to the angels and to those higher orders toward which we are ever tending. The arguments are ingenious, and the standpoint a high one. Mr. Wallace is entitled to rank high among the writers on man the present day.

VALEDICTORY POEM AND ORATION. C. C. 1871, Yale College. New Haven: C. C. Chatfield & Co.

The Poem was pronounced by J. Arthur Barr, Jr. Brooklyn, and is a very happy one—consisting of the prophetic song of three Sibyls who can "visions bright" and chime:

"Hark to our music,
Rising so sweet;
Hark to the counsels
Our lips now repeat.
List, while your Sibyls
Oracles tell;
If ye but read them
Aright, it is well."

Space prevents our quoting the dangers which Sibyls point out to the young men leaving college battle in and with the world, but the final words are so much wisdom, that we give them as follows:

"And from this tangled web of words
These threads of counsel would I give.
God grant that it may help some soul
Better and happier to live.

First, trust your God. He never fails;
Next, trust yourself; then, if you can,
Find some true heart, and trust these three;
Your God, yourself, your fellow-man."

The Class Oration, bound in the same pamphlet as Orville Justin Bliss of Chicago. Subject, The Man in Society. The tone of the whole oration is high. It is a noble plea for educated labor, and a recognition of the society of talent, even if in rags, and does great credit to the author.

THE TOURIST'S GUIDE THROUGH THE STATE OF NEW YORK. embracing all Cities, Towns, and Villages, places by Hudson River, and New York Central, etc. Edited and Published by Mrs. S. S. Albany, N. Y.

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and instruction to every one. Besides its merit as a tourist's guide, it is full of facts and anecdotes of historic interest. Price \$2.00.

A SHORT COURSE IN ASTRONOMY, and the Use of Globes By Henry Kiddle, A.M. New York: Iveson, Blakeman, Taylor, & Co.

This beautiful book will prove a great blessing to students, and may be read with profit by those who have wasted their school days, but wish to know something on the subject on which it treats.

A REVIEW OF DARWIN'S THEORY OF THE ORIGIN AND DEVELOPMENT OF MAN. By JAMES B. HUNTER, M. D. (Reprinted from the Journal of Psychological Medicine.) New York: D. Appleton & Co.

This review of twenty pages gives a very fair synopsis of Darwin's Descent of Man, without taking grounds either for or against the theories of its author. Those who have not time to read the two volumes reviewed will be greatly interested in the condensed statement which Dr. Hunter has prepared.

THE PUBLISHERS' DEPARTMENT.

Contributors to this Number.

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DR. A. L. WOOD, and
THE EDITOR.

Examples for the Ladies.—Mr. Gilbert Brown, of Williamsburgh, N. Y., bought a \$55 Wheeler & Wilson Machine in 1856 (price then \$100); borrowed most of the money to pay for it; has supported his family with it; bought and paid for a house and lot, paid taxes, church dues, etc., besides doing his family sewing. During the war he averaged daily 8 infantry frock coats, or 10 cavalry jackets, or 8 military overcoats. Since then he has earned at custom work from \$3 to \$5 per day of 9 hours, and would not sell his machine for the sum paid for it.

Mrs. M. Leary reports her earnings with a Wheeler & Wilson Machine \$700 a year for shop work and \$250 more for custom work, besides her family sewing for six persons.

Miss Sarah Lynch earned with a Wheeler & Wilson Machine, in 1870, \$731.63, stitching neck-ties.

Talks to My Patients.—Mrs. Gleason's book, advertised and noticed elsewhere, is meeting with a good sale. We can supply it to subscribers and agents in any quantity. A good many ladies are selling it with success. We should like to have in every town a good Lady Agent. For particulars of agency, write to the Publishers.

Books C. O. D.—Parties who order books will find it cheaper to send the money with the order, than to order C. O. D., as in this case the cost of collection will be added to the bill. This is considerable, when the money has to be returned from a distant point. Those who order C. O. D., should send one-fourth the value of the order in advance to insure prompt attention.

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CORRECTION.—On page 110 of this number, in fifth paragraph, fourth line, "heart white," should read "pearl white;" on same page, two paragraphs below, sixth line, should read "preparing it herself with alcohol."

See Book Advertisements,

read them carefully, and then ask yourself if you can use your money to better advantage than to purchase, read, and become possessed of information highly important to your well being for ever.

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31-31*

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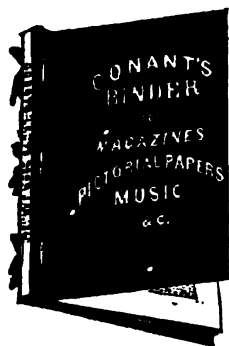
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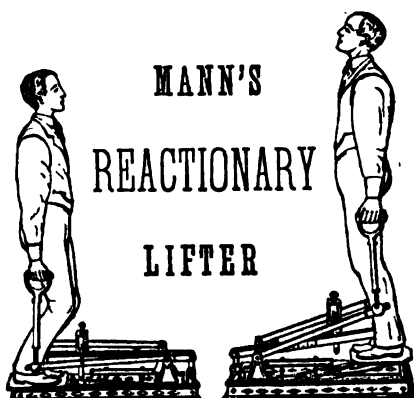
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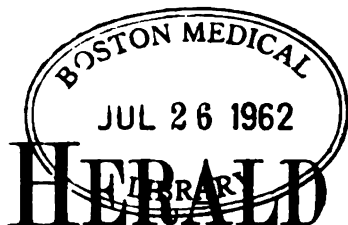
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18



THE

HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE,

ADVOCATES

A Higher Type of Manhood—Physical, Intellectual, and Moral.

CONTENTS FOR, NOVEMBER, 1871.

GENERAL ARTICLES :	Page
Temperance among the Ancients— <i>Rev. D. M. McClellan</i>	193
Early and Late Hours— <i>Rev. Charles H. Brigham</i>	201
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Birdsall</i>	206
Make Home Pleasant (A Poem)— <i>M. A. K.</i>	209
The Management of Children— <i>Francis Ellingwood Abbot</i>	210
Statements as to the Duration of Human Life— <i>E. Ray Lankester, M. A.</i>	215
On a New Set of Teeth— <i>F. B. Perkins</i>	217
Studies in Hygiene.....	219
Moral Hygiene.....	219
Ten Questions in Hygiene.....	219
Cider and the Eyes.....	221
Teeth Restored—Bone-builders.....	222
Deep Breathing.....	223
Our Dessert Table.....	224

EDITORIAL DEPARTMENT :

Health Habits and Amusements—A Letter from P. T. Barnum.....	225
Impure Air as a Cause of Disease.....	227
Shall we Send our Children away from Home to be Educated.....	228
System in Brain-work—Cholera—Dexter's Stable.....	229

ANSWERS TO CORRESPONDENTS :

Wine and Exercise—Strengthening the Lungs—Chewing Gum.....	230
How to Quit Smoking—Nitrous Oxide for Extracting Teeth.....	281

NOTICES OF NEW PUBLICATIONS :

Library of Poetry and Song—Diseases of Women—The McAllisters—Deak and Debit—Three Successful Girls—Apron Strings.....	232
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NEW YORK:

WOOD & HOLBROOK, PUBLISHERS, 13 & 15 LAIGHT ST.

GENERAL AGENTS—AMERICAN NEWS CO. . . NEW YORK NEWS CO.

\$9 per Annum.

Single Copy, 30 Cents.

perates or abstinent— they belonged to the Gnostics' order of acetics. Of these, Epiphanius, Bishop of Salamis, said, "They did not use wine at all, saying, it was of the Devil; and that drinking and using it was sinful." We are told that they were so bitterly opposed to its use, that in the celebration of the Lord's Supper, they substituted water in its place. Theodoret said of Titan, their leader, "he abhors the use of wine." The Leverians, whose founder was an Enorotate, also opposed the use of wine, as the cause of drunkenness. The Manichees; another order, opposed its use, and called it "the gall of the Prince of Darkness." The apostolic canons admit an ascetic abstinence, but reprobated those who abstained from any sense of the impurity of matter.

Among the early fathers, Clement of Alexandria (A. D. 180) said, "I admire those who desire no other beverage than water, avoiding wine as they do fire. Hence arise irregular desires and licentious conduct. The circulation is hastened. The body inflames the soul." More anciently Eubulus (B. C. 375) said, "Water makes those who drink nothing else very ingenious; but wine obscures and clouds the mind." Solomon (B. C. 1000) said, "Wine is a mocker; strong drink is raging: whosoever is deceived thereby is not wise." Must not such sentiments have aroused those to whom they were spoken?

From this historic review, it becomes evident to the most incredulous and unwilling to believe, that there have existed from the remotest antiquity, those who totally abstained from the use of the intoxicating cup, and used their influence to keep others from its fatal snare. These were actuated by different motives, some were prompted by the physical effects of drunkenness; others by its influence on society; others by religious principles; and very many by all of these combined. There was, however, a bitter spirit of controversy prevalent, which led the triumphant party to repudiate and link with real or supposed errors the Temperance principles of the past, and, in consequence of this lack of logical discrimination, produced great moral corruption in the Church of Christ. Although the Dark Ages, followed by the skepticism of later years, prevented the knowledge of these truths, or these principles exerting their legitimate force, yet these facts remain, and serve as a powerful engine in the progress of Temperance reform.

We find that the same cause produced the same effects formerly as at present. How many now become drunkards in consequence of using

alcoholic liquors as a medicine! So were nations and communities ensnared. By this device, was its use as a beverage introduced into Persia. According to Anquetil, the use of wine became common in consequence of a cure performed, on a lady at court, by its use. Many of the ancient monastic institutions of Great Britain were founded upon the abstinence principle, as is proved by their charters, but from these they gradually departed, by the hospitable and medicinal use of wine, until "good cheer" and drunkenness became the rule. Can not the experience of the past, as well as the present, teach us the danger of its use as a medicine?

History tells us the sad consequences of drunkenness, not only on individuals, but also on nations, many of which were ruined in consequence of it. Diodorus Siculus describes the capture of Nineveh by Arbaces the Mede and Belesis the Babylonian, and tells us that after the besiegers had been defeated in the field, the Assyrians gave themselves up to a drunken feast, when they were attacked by their enemies and defeated with great loss. Babylon fell when rulers, soldiers, and citizens had given themselves to intoxication. Daniel tells us of the feast and free use of wine. Xenophon, in his "Cyropædia," tells us that all Babylon was given up to revelry in celebrating one of the great festivals of Bel, when Cyrus captured the city. Herodotus informs us, that in consequence of the drunkenness of the soldiers, the gates opening toward the river had been left unguarded; through these the army entered, and captured the city. The Prophets tell us that drunkenness was one of the causes of Israel's and Judah's captivity. Macniah has aptly said, "They (intoxicating liquors) seem to act like the simoom of the desert, and scatter destruction and misery around their path. The ruin of Rome was owing to luxury, of which indulgence in wine was the principal ingredient. Hannibal's army fell less by the arms of Scipio, than by the wines of Capua; and the inebriated hero of Macedon, after slaying his friend Clytus, and burning the Palace of Persepolis, expired at last in a fit of intoxication, in his thirty-third year." We would urge the inquiry, Is any nation safe that sanctions and encourages the use of intoxicating liquors? Results in all ages of the world prove the same danger, and consequent ruin.

We may ask, What has been the influence of civilized nations, ancient and modern, on the uncivilized? The Bible Temperance Commentary (p. 338) says, "The history of European intercourse with uncivilized tribes, like the North American Indians and New Zealanders.

and with peculiarly civilized nations, such as Hindoos and Chinese, is replete with rank and noisome offences against the apostolic rule of practice—a rule as obligatory on nations as on individuals.” With the blessings of civilization came wealth, power, luxury, and their accompanying vices; and these vices, in both ancient and modern times, exerted their baneful influences both at home and abroad, and in the end bring a blighting curse. (Deut. viii. 11-20.) Thus did many ancient nations contract the vice of drunkenness in enjoying their luxuries.

The facts adduced prove that the Temperance agitation has not been wholly a recent one, but from the remotest ages there have been opponents to the inebriating cup, and prohibition forbidding its use. They also show that the character of ancient liquors can not be judged by the standard of the modern spirits. A knowledge of these facts enables us to understand and correctly interpret the enunciations of the Bible, by which we may put to silence the advocates of the liquor cause.

Early and Late Hours.

BY REV. CHARLES H. BRIGHAM.

IF sage advice and proverbial wisdom can justify any habit, the habit of early rising and early resting is abundantly justified. This is the teaching alike of thrift and of physical vigour. “Early to bed and early to rise is the way to be healthy, wealthy, and wise”—that was the musical couplet which all children learned in the last generation. The proverb of the worm and the bird has found a new interpretation in the wit of our time, which changes its force, yet it is still repeated as a reproach to the sluggard. Even in Paris, where night takes the place of day, you may hear in the *halles* of the market, as you congratulate the women on their fresh colour, the answer, “*Homme matineux sain, alegre et soigneux.*” A favorite jingling proverb in Denmark, where every thing is so snug and comfortable, is, “*Heo aarle riis, han vorder mangt viis*”—He who rises early, will get wise more fully. And then, there is the musical Spanish proverb, “*A quien madruga, Dios le ayuda*”—God helps the man who gets up early. All these proverbs are perhaps inferences from the example of the Hebrew patriarchs, of most of whom it is recorded that they were early risers. Abraham and Jacob, and the men of their race were usually astir before the break of day.

And probably most races of men are early risers, and most men and women in all races. It is not needful to urge the toilers to get up in season; necessity anticipates the precept. In Italy, you may see the peasants going out from the towns to the fields, while the dawn is yet

faint, and the stars shine in the sky; or gathering at the stalls, where they are selling fruits and nuts in the light of flaring torches. The Scotch cotter begins his day in winter long before the sun makes any sign. The Swiss herd boy wakens the echoes with his jodel in the small hours of the night, as the tired traveller knows to his sorrow, vainly seeking sleep in the hooting notes of that falsetto. In New York, cars rattle upon the pavement as heralds of coming day almost when fashion comes home jaded from its night's dissipation. Labour everywhere, of those who till the soil, or toil at the work-bench, heeds the proverbs of early rising, and accepts them as the divine order.

But early rising is rather a necessity of the working class, than a doctrine of any class. Those who get up betimes are apt to envy the fortune of those who can lie longer. Increase of wealth is apt to change the habit. The practice of the prosperous classes is mostly quite alien from the word of the proverbs, and that practice is made the foundation for a confident, if not a plausible theory. Sober essays are printed, which insist that the benefits of early rising are imaginary and delusive; that the habit does more harm than good, and is neither healthy nor prudent. The instances of longevity of men who rise at 4 o'clock are more than matched by similar instances of men who have slept until 7. It is denied that the one class do more in the day than the other, learn any more, or get rich any faster. We are referred to the great bankers in London who never breakfast before 9

A knowledge of the laws of fermentation teaches us that, in a warm climate, there must be some mode by which these liquors may be preserved. The vinous fermentation takes place at a temperature from fifty degrees to seventy-five degrees. If the temperature is from seventy-five degrees to ninety-five degrees, the acetic fermentation follows, and above this complete putrefaction. Consequently, without any way of preserving and preventing fermentation having its complete work, the wine would be converted into vinegar, and the vinegar become rottenness. As distillation was not discovered until the ninth century, and not practiced generally until much later, there must necessarily have been other modes of preserving liquors.

It is not possible to keep the juice of fruits from fermenting without the use of some preventive, unless it be kept at a temperature below forty-five degrees. Neither can fermented wine be preserved unless it be drugged, or has an addition of from ten to twenty per cent. of alcohol; consequently, the wines of commerce are fortified by the requisite per cent. of alcohol.

As some process was necessary to preserve their wines, the ancients very generally prevented fermentation, and thus retained the nourishing properties of "the blood of the grape," so that it was not intoxicating, but as harmless as milk. There were different processes employed to prevent fermentation, so that they could freely use the wine without the least fear of intoxication.

That they might prevent fermentation, they boiled the fresh juice of the grape, or fruit. Baron Liebig, the greatest chemist of this age, tells us that "the property of organic substance to pass into a state of decay is annihilated in all cases by heating to the boiling point." This is a principle well understood by every housewife, as is evident from the boiling processes to which they subject their fruits. The juice of the grape will boil at two hundred and twelve degrees, but alcohol is evaporated at one hundred and seventy degrees; so that if there were any alcohol in the juice it would be expelled at forty-two degrees before it came to the boiling point.

Not only do missionaries and travelers tell us that the fresh wines are now, in the Eastern countries, boiled to prevent fermentation, but also standard authors affirm that they were thus anciently preserved. Adams, in his *Roman Antiquities*, published A. D. 1791, on the authority of Pliny and Virgil, says, "In order to make wine keep, they used to boil (*decoquere*) the must down to one-half, when it was

called *defrutum*, to one-third *arpa*." Archbishop Potter, born A. D. 1674, in his *Grecian Antiquities* says, "The Lacedæmonians used to boil their wines upon the fire till the fifth part was consumed; then, after four years were expired, began to drink them." For authority, he cites the celebrated philosopher Democritus, who died 361 B. C., and a Greek physician, named Pylæus. We have the authority of Dr. Nicolaus, late President of Union College, N. Y., that Columella, and other writers cotemporary with the Apostles, say, that "in Italy and Greece it was common to boil their wines." Virgil, in his *Georgics* (lib. I. 295), says:

"Aut dulcis musti Vulcano decoquit humorem.
Et foliis undam tepidi despumant aheni."

Wines thus boiled did not become fermented. Caspar Neuman, Professor of Chemistry over a hundred years ago at Berlin, said, "It is observable that when sweet juices are boiled down to a thick consistency they not only do not ferment in that state, but are not easily fermented when diluted with as much water as they lose in the evaporation, or even with the very individual water that exhaled from them."

Another mode of preventing fermentation was by the use of the filter. The filter was not a mere strainer, but one so closely constructed as to separate all the gluten from the juice so that none remained to produce fermentation. Ptolemy, Pliny, and others speak of the process.

Another process was that of *subsidere*. The wine will not ferment below forty-five degrees; the gluten or yeast being heavier than the juice soon sinks to the bottom, and fermentation becomes impossible. Pliny gives the process: "They plunge the casks, immediately after they are filled from the vats, into water until water has passed away, and the wine has acquired the habit of being cold." Columella gives similar recipes.

Another way was by fumigation. Adam Smith says that "the Romans fumigated their wine with the fumes of sulphur," and authors are quoted by him for proof.—*Patton's Laws of Fermentation and Wines of the Ancients*, p. 24-41.

Having noticed the different ways by which wines were preserved from fermenting, we shall be the better able to understand the qualifications term employed. Many of these are obscured by being misunderstood, causing the fermented and unintoxicating to be mistaken for the intoxicating drinks.

We read of new wine and sweet wine. We will, doubtless, be ready to admit that they were not intoxicating. The author of *the*

midnight oil, on Saturday night at any rate, in preparation for pulpit duty, which they have postponed until the latest moment. A physician in active practice in a large town may get to bed early, but the chances are that he will not stay there; his first doze will be broken by the summons to harness the horse and ride swiftly half a dozen miles, more or less. In London, during the session, the best working hours of Parliament are in the night, and the critical "divisions of the House" come at the witching hour. On the sleeping-cars, the passengers may be sent to bed early, long before they are ready, but the brakemen and conductors must not yield to the drowsy god, even when the signs of slumber are audible around them. Watchmen, of course, can not sleep in the night. And thieves of all kinds are apt to keep late hours, whether they run opera houses, and club houses, or break into back windows. It may be presumed that the members of the New York Ring are on the alert at midnight as much as any of the Bill Sikes' or the artful dodgers of the Five Points.

As we grow older, no doubt, we learn wisdom in this matter. The gray-haired parent, whose dancing days are over, and whose limbs are not elastic, is glad to hasten bed-time, and to leave his daughters to their foolish joy in the late hours. He would lengthen his nights in spite of his difficulty in sleeping. Very few persons over sixty years old care to sit up after 11 o'clock in the evening, and would rather be invisible at an earlier hour. Old age may not need more sleep than youth, but it is more covetous of sleep, and sooner disgusted with the day's excitement. "Go to bed early" is the advice which the elders give to the younger race, all the more emphatic as they remember their own sins in this kind in the former years, and wonder that they could have taken such needless risks in those night-rides and frolics. That is the advice, too, of the medical journals and men;—was there ever a wise physician who would counsel his patients to sit up until midnight, as a rule, or even as a frequent exception? The wisdom in this matter, nevertheless, is of the kind that comes by experience, and the sage warning of the elders is oftenest unheeded. So long as Fashion justifies and demands late hours, the gray-beards and the doctors will spend breath to no purpose. The discovery of Petroleum has neutralized the warnings of Hygiene, in furnishing light so cheap and so abundant. Early hours in a town which has its gas works are not to be thought of. Shall the enterprising company so be cheated of its profits, and the

smart village curtail its brilliancy, and keep the former evening darkness of its rural life? If for nothing else, let us sit up late, that we may not seem niggard in our use of light, and that the benighted wayfarer may take heart when he sees this beacon in the distance. Those who are determined to keep late hours can find many excuses, in spite of the contradiction of the proverbs, the doctors, and the experience of the elders.

The suggestions that we offer in this matter will probably not be heeded by young men and maidens in "good society," since they deny, so positively the customs of good society. We limit them to the round number of *ten*, although that number might as well be doubled.

1. *Go to bed when you are sleepy!* Do not undertake to force wakefulness, when attention fails and the brain finds its blood running sluggishly. One may be sleepy, indeed, where it is not expedient or proper to let nature have its way, as in waiting upon a dry lecture or a dull sermon; and a considerate pastor, remembering how hard it was to write the tedious paragraphs, will pity rather than condemn those who are overcome by their heaviness. But in the night, drowsiness is the best monitor of bed-time. One who is half asleep is, as the Western men say, "of no account" in amusement or conversation, and would better be wholly asleep. It is no compliment to a host or to a guest to listen vacantly or with drooping eyelids, to words which lull while they leave no other impression. When one can not keep awake without a painful effort, it is time "to retire," no matter how early the hour of evening. And it is the part of politeness to propose that to a guest who may show drowsiness in manner, even if late hours be the rule of the family; as the opposite rule still more holds good, that a guest should never, to accommodate his own habit or whim, derange the evident order of the house where he is received, or keep them beyond their accustomed hours.

2. *Go to bed when you are tired!* One may be fatigued without being drowsy, and may wish for the freedom and relaxation of a couch, and it is only a sin against nature to sit up in such a condition. Often sleep comes reluctantly to the tired frame jaded from long travel, or the tired brain vexed by much excitement. Yet the bed is better for these than any attempt to keep up appearance of comfort in the drawing-room. A tired body, or a tired spirit, has a right to its rest at any hour, either of day or night. One need not be ashamed to confess fatigue as a reason for leaving the company in

the midst of its hilarity. There is no glory in that martyrdom which keeps tired men and women on their feet when they would fain be in their beds.

3. *Late evening suppers should be shunned.* It is not good to cram the stomach with food before going to bed, or to make a solid dinner the proface to a night's repose. In spite of the fashion, in spite of the temptation of these boned turkeys, and these salmon-salads, and these oysters in every shape, and this dazling away of costly delicacies, we still insist that it is not good to yield to this temptation, and to outrage the digestive function with these solids at 11 or 12 o'clock at night. The supper-room at evening parties, fascinating as it is, is a snare of Satan. Many of those who are busiest in it know they are committing sin, know that they are destroying the privilege of their night, and that they are preparing for headache and heaviness in the coming day. Light fruits in the evening may do no harm, and rather bring more sweetness to the sleep. The average Englishman is sure that a cracker or two and a Welsh rare-bit will give him slumber more profound. But no food of any kind amounting to a meal should be taken in the stomach, except in those rare cases where it may act as a salutary warning.

4. And this caution is even more important in regard to stimulants. *"No intoxicating drinks before going to bed."* Perhaps the rule ought to go farther, and say, "No intoxicating drinks at any time." Waiving that now, we may insist the old prejudice of a "nightcap" of punch or whisky, or even lager beer, is not to be defended. Champagne suppers are a very poor preparation for refreshing sleep. Stimulating drinks, too, which are not intoxicating, are equally to be shunned in the evening hours. In an essay of a previous series, we spoke of coffee at night as worse than wine, and we are not disposed to modify that assertion. No beverage that exhilarates, that stirs the blood, or that excites the nerves, is good as a preliminary of the night's repose. It is of no avail to go to bed early, if sleep be murdered in advance by stimulating drinks, whether they cheer or whether they inebriate. The sleep that comes from intoxication is not refreshing, but is full of nightmare and horrors, of frightful dreams, and of hideous shapes. If you must drink, drink in the morning rather than in the evening. Nectar is for labor, and not for slumber.

5. This rule against stimulants may be enlarged so as to include all kinds of excitement. If the evening is the time for amusement, of course, we may not put all kinds of excitement

under ban. But we may say that *amusements which try the brain and excite the nervous system unduly are not good before going to bed.* Half a dozen sharp games of chess are not to be commended as healthful in the hours of evening. Billiards, which give so much bodily exercise along with the calculations of the eye and brain, may be allowed even into the night; but chess in these hours is only a form of suicide. Stimulating dramas, too, are of questionable value as amusement, when they come in the evening. If the Ober Ammergau Passion play were given after sundown, its excitement to the nerves of the spectators would make it as murderous as the plan of Judas and the Jews. To look upon a tragedy in five acts, in which there is cumulation of horrid crime, unfits one wholly for the right use of his pleasant couch, substituting for healthy rest the haunting and damning visions of Clarence and Macbeth.

6. These advices, perhaps, are aside from our main subject. More directly applicable is the counsel to *get sufficient sleep in the night, to go to bed early enough to get all the rest that the system needs.* This has not been fairly ascertained, it may be said, and some persons do not need so much sleep as others. There are old men who have done in their lives a good deal of hard and of substantial work, who have only spent six hours out of the twenty-four in bed and have always been hale and hearty. With their cases before us, we still hold to the one-third rule, which will have eight hours for sleep, no matter how many are taken for labour. It is safer to secure eight hours than to limit oneself to a lesser allowance. No one, man or woman, need to be ashamed in confessing that one-third of his life is spent upon the bed. Better uses for the other two-thirds come from that seeming waste. Seven hours may do in many cases, especially where one indulges in the luxury of the after-dinner nap; but it is safer to err on the side of indulgence here than on the side of parsimony.

7. If the hour for going to bed can not be made regular, there should at least be a *regular hour for rising in the morning.* There seems to be a provision in the human constitution by which one can wake up always at about the same hour, no matter how long he has slept. Nature conforms herself here to the human plan, and seems to second the will even when one is unconscious. The hour for getting up may be earlier or later, but it should be uniform, even if it may involve loss of sleep in some unlucky nights. It is not well to make up by a long sleep in the morning for the fault of the

of Christ be stimulated to enforce the prohibitions of the Bible more faithfully.

It is a fact, perhaps not generally known, at least to the masses, that the old Roman law of the twelve tables prohibited the use of intoxicating wine to women. Pliny also says, "It was not lawful for women to drink that"—intoxicating wine—and tells us that this law was sometimes enforced by the husband, who acted both as judge and executioner. He adds that "kinsfolk kissed the women, when they met them, to find whether their breath smelt of *Tetium*," or intoxicating wine.

All familiar with the Bible record will readily remember that the mother of Samson was forbidden to drink wine or strong drink. On his the Temperance Bible Commentary remarks: "That indulgence in the use of strong drink by expectant mothers would be injurious to their offspring, was known to the learned and wise among the ancients. Plato, Aristotle, Plutarch, &c., have noticed the hereditary transmission of temperate propensities, and the legislation that imposed abstinence upon women had unquestionably in view the greater vigor of offspring—the *mens sana in corpore sano*—(healthy mind in a healthy body)—one of the choicest heritances of the human race." *

Drunkenness was not, by the Greeks, considered as a plea for the mitigation of punishment for crime. Macnisch, in his *Anatomy of Drunkenness* (chap. xiii.), says, "In ancient times it was decreed by Pittacus that 'he who committed a crime when intoxicated should receive a double punishment,' namely, one for the crime itself, and the other for the inebriety which prompted him to commit it. The Athenians not only punished offences done in drunkenness with increased severity, but by an enactment of Solon, inebriation in a magistrate was *de capital*." The Roman law admitted inebriation as an excuse for crime in men, yet punished at one time the vice itself with death, and in women.

As we have noticed the judicial treatment of drunkenness among the ancient Greeks, it will be irrelevant to state that the Mosaic law,

recorded (Deut. xxi. 18-21): "If a man have a stubborn and rebellious son, which will not obey the voice of his father, or the voice of his mother, and that when they have chastened him will not hearken unto them, then shall his father and his mother lay hold on him and bring him unto the elders of the city and unto the gates of his place, and they shall say unto the elders of the city, 'This our son is stubborn and rebellious; he will not obey our voice; he is a glutton and a drunkard.' And all the men of his city shall stone him with stones, that he die; so shalt thou put evil away from among you, and all Israel shall hear and fear."

Paul also taught the Corinthians that the vice of drunkenness should receive no countenance from the Church; for if one of their number gave himself up to this sin, they were not to keep his company—"with such a one no, not to eat." He declares the "inexorable law of God, that drunkards shall not inherit the kingdom of God."

The prohibitions against the use of inebriating drinks, and judicial treatment consequent to drunkenness, are in perfect accordance with the character by which intoxicating liquors were regarded by many of the ancients. Many of them looked upon it as and called it poison. It was the custom of the Greeks when they saw a drunken man, instead of saying, "The man is drunk," to say, "The man is poisoned." Our word intoxication is derived from the Greek word *toxicon*, signifying poison. In India, the word *rangan*, meaning a drunkard, also means a madman, recognizing the enraging or poisonous properties of the baneful drink. That the ancient Persians regarded it as a poison is evident from the words that Xenophon represents his youthful hero, Cyrus, as uttering. The incident will be remembered by all Greek students who have read Xenophon's "Cyropædia." Cyrus undertook to hand the wine-cup to his grandfather, Astyages, more dexterously than the cup-bearer, when the king jocosely asked why he didn't taste the wine, as it was customary for the cup-bearer to do. The youth replied, "Because he feared that poison had been mingled in the cup, for at the entertainment he had given his friends on his birthday he plainly saw that poison was poured in the cup." The astonished Astyages inquired how he knew that. He replied, that they had become deceived in both mind and body—he said, "Those things that you do not let us boys do, you do yourselves. You all cry out together, and can learn nothing from each other; you sing ridiculously, and although you don't hear him that

*Plato, twenty centuries ago, recognized a fact in physiology when he forbade the use of wine to the newly-born child. It perverts the brain of the unborn child; it is a blow at reason and virtue in the very womb. It is the real cause of so many ill-balanced minds, neither more nor sensible, and in its higher use it is the torment of the sad idiotry which disgraces and degrades our boasted civilization. (Lee's Text Book of Temperance, p. 97. See also Matthew Henry's Commentary on Judges xiii. 4.)

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. E. C. BIRDSALL.

FRIDAY, June 1.

MUCH of one's enjoyment of life comes, I think, from the vivid recollection of past events or even thoughts. There are times when my mind seems specially full of pleasant memories—this afternoon was one of these occasions. I rode over to Torrence with Henry, and the road, which is always beautiful, was continually suggesting agreeable thoughts to me. A little brook by the side of the road rippling over the stones, the water very clear, and bright with lovely lights and shades, recalled the intense delight which I used to feel as a child in running water; the roses in bloom about every house, and the honeysuckle with its lingering perfume took me back to early days and scenes. And indeed almost every thing that I noticed along the way brought its own pleasant recollection. For awhile I talked my thoughts to Henry, but at length they thronged into my mind so rapidly that I became quiet and lost in reverie. From this Henry roused me by exclaiming, "Why, Annie, what makes you so quiet?" I explained to him how I was employing and enjoying the time, and we compared our experience in this matter of thought. What we can not understand nor explain, is that we are both often conscious of thinking of things entirely remote from the present time, and *not* suggested by any present occurrence. For instance, I may be engaged in the most prosaic of housework, when suddenly a scene from Peveril of the Peak flashes into my mind, tapestried walls are about me, and through a secret opening, where one would least expect it, a figure appears. At another time, when in a public assembly, I will all at once be transported backward twenty years, and I am sitting in my grandmother's kitchen-door eating such bread and milk as I can never taste again, for it was made the sweeter to me by my fresh child's taste, and by the beautiful accompaniments of summer twilight, sweet odors, soft and soothing sounds. Again, when engaged in interesting conversation with some friend I think of my enjoyment as a child in sleeping near a shed-roof and hearing the rain of summer showers patter upon it. These scenes appear as rapidly and unexpectedly as the views of a magic lantern. I have often endeavored to trace a connection between them and present circumstances,

to think of an accounting cause for their appearance, but have never succeeded in doing so. To-morrow I shall commence the entertainment of company. Lena Willis, whom I have not seen for so long, and who was formerly so dear a friend, is coming first.

Sunday, June 3.—Am I to blame, or is Lena herself, for a something lacking that I find in her? She used to appear to me *childlike*; she now seems *childish*, and to affect an appearance of artlessness, which does not sit gracefully at her age. A *woman*, although she may retain the innocence of heart that she possessed as a child, can not remain the same in manner, if she has any appreciation at all of life's noble purposes. But the time of awakening to this truth may come at different times in different lives. And I must remember too, that thoughts of personal deficiencies are probably not all on one side. Lena may, in her turn, think that I have grown staid and old, and am too matter of fact. We can not help our natures, but we can adorn them with those amenities which do so much to make us agreeable to those about us.

Monday, June 4.—Lena enters heartily into my plans for getting people into the open air, who have no means of their own to enable them to do so. This morning she gave old Mr. Welsh a ride in my low carriage, and came home quite enthusiastic over him. "Such a delightful gentleman she never knew, worth a dozen of young gentlemen." Rather a sweeping remark, and perhaps, not quite correct, as there are undoubtedly many good, reliable, intellectual young men at the present time. It has been her misfortune to come in contact with examples of the opposite character.

Wednesday, June 6.—At the meeting of the Mutual Improvement Society to-day, the subject of novel reading was discussed. There were several ladies who disapproved of it *à toto*, others were doubtful. My opinions were positive and decided, and I had thought so much of them that I expressed them with some degree of earnestness.

I adduced my own experience in favor of my position. When very young, only a child indeed, I had an almost insatiable appetite for

novels, and gratified it by reading every thing that came in my way. The consequence was that I acquired a distaste for all reading of a substantial nature. Awakening at length to the danger of this, I stopped reading novels, refusing for a year to read a story of any kind, whether good or poor in quality. This course of treatment acted as a mental tonic, and thereafter I was able to read some novels, and turn from them with ease and interest to works of solid character. But I could never again read a novel which was really trashy. So much of my experience convinced me that children had better be kept entirely from novels, as liberty of reading them, however restricted, excites a taste which it may be difficult to conquer. The mistake is usually made when children are very young, in pampering them with stories. These are supposed to be particularly adapted to a child's mental capacity; while, in reality, almost every child has a strong and decided taste for plain and unvarnished facts relating to natural subjects. This taste, if encouraged and fostered, will render it comparatively easy to guide children into paths equally useful and interesting. A liking for substantial reading, once rooted and grounded, I believe it is for the best that every young person should read some good stories, for there have been novels written more calculated to convey a good impression than any amount of practical instruction. I would not, upon any consideration, part with the good which I have received from certain novels. John Halifax, read while young, helped to form my ideas, until then crude and unformed, of what every man ought to be, upright, firm in a position rightfully taken, gentle, courteous, and, above all, pitiful.

The scene in which he stopped his horses, spoke to the sinful Lady Caroline, took her into his carriage, shielded her from the rude gaze of bystanders, and carried her to his own pure home, without shrinking from the pollution and defilement that were about her, made me think of Christ's tender charity toward the erring and lost. The Dove in the Eagle's nest impressed upon me the immense influence that a Christian character may exert in the midst of powerfully opposing conditions. A noble life showed me that the soul may be noble and lovely, in spite of the deformed body, shining through, attracting every one, stilling every harsh, degrading voice, and leading all to love and reverence. The same ideas might have been acquired without ever reading a novel, but I can not think that they would have been so vivid, so much a part of myself. The books that I have men-

tioned do not, as I well know, stand in the front rank of novels, as regards plot and imagery. One can but feel that they contain relations of events that have taken place, rather than pictures of imagination; but even the novel proper, of which class Sir Walter Scott's are perhaps the noblest examples, should be read, or the mind lacks a pleasant stimulus, by which it would be the better prepared for mental labor. Only this should be in moderation, as the dessert, not as the full meal. Scott's novels were the mental food of my very early days, and my impressions of them are distinct. Their general effect upon me was admiration of the noble in character, shrinking from the evil, enjoying appreciation of the peculiarities of those about us, an admiring love for the grand and beautiful in scenery. I can not say that they did me any particular good, but am equally certain that they did me no harm. It is generally acknowledged, I think, that Scott's writings are singularly devoid of direct moral influence, and this was my own feeling developed with my thinking powers. Mrs. Hutton said that she held very similar views to mine, and nobody seemed inclined to dispute them, though I do not suppose that all were convinced. Of course, by these discussions at our Society meetings, we can not consider a matter settled, but we may be aroused to thought, and may finally approximate more nearly to the right.

Thursday, June 7.—Lena is greatly entertained with Madge's eccentricities, and draws them out in such a lively, amusing way as to render them very ludicrous. I fear that it may have a bad effect in rendering Madge forward, from being so much noticed. Some natures can not bear it, and I think that Madge's is one of them. But, whatever may be the result, it is very mirth-provoking to watch Madge's queer performances and to listen to her singular sayings. Lena makes capital of all her oddities, and brings them out in the most approved style. Madge's attacks of sickness are frequent; indeed, she is, or supposes herself to be, afflicted with some disease all the time. I think she would be perfectly contented if she had some one constantly at hand to listen to all her imaginary fears. Within the last two years she supposes herself to have had disease of the liver, rheumatism, consumption, heart disease, dysentery, neuralgia, chills and fever, dyspepsia, dropsy, and hysterics. Between times she has cuts, bruises, bumps, and burns innumerable, all of which are worse than any one else ever had. She seldom goes out for an afternoon, without coming home with a new

view of her disease, adopted after consulting the opinions of her friends. By the way, most of her friends are Americans, for she is too belligerent to keep any Irish friends.

Some time ago I looked over a large and popular work upon Homœopathy, the author's name escapes me, and I came to the conclusion that there was little need of *physicians* to practice this branch of medical science. The course of treatment seemed to be the same for all diseases, to administer any remedy you might choose for any disease; and, if that did not cure, to try another, and then another, and so on, through the entire list of Homœopathic remedies, until the patient was beyond the necessity of further treatment, one way or the other. Madge, by the education of nature, has adopted the same course with Allopathic remedies. Castor oil, tincture of muriate of iron, catnip, peppermint, paregoric, pennyroyal, boneset, quinine, and the ordinary cholera medicines are varied by the application of mustard and bran poultices, bags of hops, plasters, liniments, and Dailey's Pain Extractor. Pills were much respected by her, until she almost killed herself with an overdose of Græfenberg's Vegetable Pills. Consumption is an unfailing resort, and, when afflicted with this, she goes about the house with a less elephantine tread, speaks in more subdued tones, coughs gently when any one enters the kitchen, gives utterance to frequent moral reflections upon the shortness and uncertainty of life, and often shows her hands and arms to us that we may see how she is wasting away. She is of the common Irish build, all wide and no long, and imagines herself to be exceedingly small and delicate. She looks at her hands, spreads them out before our eyes and says, "Ah now to look at the little delicate hands, wud any one think they could do so much wurk?" She can never get a ready-made shoe to fit her, which is, as she maintains, in consequence of her foot being so small—i. e., so short, and broad, and thick. Lena's amusement is at its highest point in noticing the way in which Madge accommodates herself to all sizes of cast-off dresses. Nothing comes amiss to her, from Lena's dresses who measures eighteen inches round the waist, to my own capacious ones of twenty-seven inches. She has been detected in letting out the last mentioned ones, but it was "only because they were not the right shape for her figure." The eighteen-inch dresses she wears open with a sacque over them, for she "can not wear any thing *just to fit her*, she thinks it must be because she has the dropsy."

Saturday, June 9.—I spent this morning in clearing Mary Morgan's little flower-bed from weeds. It is just where she can see it, as she lies in her bed by the open window, and I am sure will give her much happiness. I have given her a few plants, a dark heliotrope, a lemon verberna, a lovely rose which blooms almost continually through the summer, a rose geranium, a geranium with a pink blossom, six pansy plants, and six verbenas of my seedlings. With these she can have a fine show.

I have a great many applications for cuttings of my plants from the poor people of the place. Last summer I kept a large bed of clear road sand, which I had thoroughly washed, and in which I put slips from my nice plants, whenever I could spare them. In this way I had a sufficient supply for all my neighbors, and it was very pleasant to give them things which they have been accustomed to look upon as beyond their reach.

Apropos of this subject of flowers, I had a singular dream a few nights ago. I seemed to be walking in a garden, and by my side walked Martin Luther, discoursing to me quaintly, pleasantly, and instructively upon the various branches of horticulture. Of course it seemed perfectly natural, as every dreamed-of occurrence does.

THE SOUL'S DISCIPLINE.—Religion is the discipline of the soul, through sorrow and joy; through evil and good. It is the baptism sometimes of great sorrow, and the cup sometimes of intense bitterness. The object of religion is, through all the good and evil, the ever-varying interchanging conditions of life, to make us not merely happier but better. How many are there who consider it a passport by which to escape hell and get into heaven, some sort of badge by which to escape the evil and get the good. Truth may be sought not only for itself, but for selfish ends. Do we seek religion as a vehicle or arbitrary condition? Do we seek religion because it will land us in heaven at last? It will never land us in heaven, until we find heaven in ourselves. Religion in itself is goodness, truth, righteousness and love.
—Chopin.

A SPIRIT of innovation is generally the result of a selfish temper and confined views. People will not look forward to posterity who never looked backward to their ancestors.—*Old Fellow.*

Make Home Pleasant.

BY M. A. K.

FOR their sakes, your sons and daughters,
Ever present,
Looking up to you, their parents,
Make home pleasant.

Let them have no cause to wander
Or to linger
Where sin beckons with her ready
Tempting finger.

Though you may not pet and pamper
Self-indulgence,
Let home firelight shed its glory,
Blest refulgence.

As your heart yearns for the comfort
Of your treasures,
So their young blood, running riot,
Yearns for pleasures.

Give them these, with prudence tempered,
Flowers of beauty,
Such as once you plucked in youth time;
'T is your duty.

Starve them not on folly's diet,
Evanescant;
Yet use wisdom with your license,
Make home pleasant.

Be Not Discouraged.

THEY say the professions are crowded
By seekers for fame and for bread,
That the members are pushing each other,
As close as their footsteps can tread.
But be not discouraged, my brother,
Nor suffer exertion to stop,
Though thousands are pressing around you,
There's plenty of room at the top.—S.L.

o'clock. Was not Justice Story, who dearly loved his morning nap after his midnight study, able to show to his delighted class in the Law School a melancholy evidence of the effects of early rising in the nodding heads of his eminent visitors, John Quincy Adams and Josiah Quincy? Early rising is now pronounced to be only a popular prejudice which must vanish with other prejudices. We are told that a sound hygiene commends the modesty that will not rise before the sun, and that while the days may be shortened by that method, the years will be multiplied. Man is not to be guided here, more than in his eating and drinking, by the examples of the lower animals. It may be well for the lark to sing at heaven's gate and welcome the morning; but men and women are not larks, and may leave that office to the bird that has nothing better to do. And the young man had reason who saw in the proverb of his father the folly of the worm as much as the wisdom of the bird; the one was as applicable to his own case as the other. Perhaps some of these defences of late rising are meant to be playful, or, as Artemus Ward would say, "sarcastical;" but there can be no doubt of a growing feeling in favour of later hours of rising, even among intelligent men, who have no dissipated taste, and are not lazy. The physicians counsel more sleep, and allow it at the end rather than at the beginning of the night.

Late hours in the evening are not so seriously defended, yet there are some who find easy apologies for their own practice in this direction. The student insists that midnight is better for study, when the sounds of nature and the hum of labour have died away and every thing is still. He can not afford to lose those divine hours of thought. Not a few declare that it is of no use for them to go to bed early, since sleep will not come, and they can only toss and turn upon an uneasy couch. Fashion, the despotic arbiter in the cities, sets a ban upon this doctrine of early sleep. One who insists that his door shall be shut and his light shall be out at 10 o'clock, in such cities as New York and Chicago, simply withdraws from society as much as if he had become a Carthusian monk. Social life, as illustrated in evening parties, begins at that hour of the night. A rule of that kind cuts one off from the most refined amusements, from concerts and operas, and banquets, and balls, and is fit only for the infirmities of age. "Early," in the dialect of fashionable society, does not mean what it meant in the Puritan days. In many places, no one who valued his reputation would venture to go to an evening

entertainment before 9 o'clock, and he might seem rude in leaving before midnight. Civilization seems to advance the order of the hours, until night becomes evening, and evening becomes morning, and morning in turn becomes night, so illustrating in a new way the old plan of creation. It is odd, for instance, to see a *matinée*, a morning entertainment, advertised at 2 P. M., or the "Vesper" service in the church in December at 8 P. M., three hours after the evening light has faded; or to be met when the sun has passed the meridian and is well down toward the west, with the salutation, "Good morning." A Vermont Yankee finds himself nonplussed in Paris in learning that the *djeuner*, or breakfast, is at 1 in the afternoon, an hour later than his own dinner-time, and that the *diner* is at 8 in the evening, three hours later than his own supper-time. And that custom of Paris is coming to be the custom of our leading American cities, where the distance of the place of business from the home compels so many to adopt the late dinner-hour. There are those in New York, and not foreigners either, who breakfast at noon-day.

And some will plead that if they are to have amusement at all they must have it in these late evening hours. They have to work all day, to keep to business; the night must be their time for play. It is of no use to go to the counting-room or the shop before the customers come, and you certainly would not have them leave their business while customers continue to come. Indeed, some trades drive the briskest traffic in the hours when honest men should sleep. The light is as brilliant in the liquor saloons in the late as in the early hours, and the druggists with their fountains keep open invitation to those who return from the theatre. The theatre can only be supported by allowing it to encroach upon the hours of sleep. If you commend amusement, some will say, give us time for amusement. If you permit dance and song, give us time to hear and join in these. We must have them in the night or not at all. And if you prohibit the only hours in which busy men and women can enjoy them, you might as well take the stronger ascetic tone, and prohibit the amusements themselves as sinful.

And there are some kinds of labour which make it impossible to get to bed early—of labour too, which is of the brain rather than the hand. The managing editor of a daily morning newspaper, which is to publish not only the latest telegrams, but suitable comments upon them, must be wide awake in the small hours of the night. Many preachers are compelled to burn

midnight oil, on Saturday night at any rate, in preparation for pulpit duty, which they have postponed until the latest moment. A physician in active practice in a large town may get to bed early, but the chances are that he will not stay there; his first doze will be broken by the summons to harness the horse and ride swiftly half a dozen miles, more or less. In London, during the session, the best working hours of Parliament are in the night, and the critical "divisions of the House" come at the witching hour. On the sleeping-cars, the passengers may be sent to bed early, long before they are ready, but the brakemen and conductors must not yield to the drowsy god, even when the signs of slumber are audible around them. Watchmen, of course, can not sleep in the night. And thieves of all kinds are apt to keep late hours, whether they run opera houses, and club houses, or break into back windows. It may be presumed that the members of the New York Ring are on the alert at midnight as much as any of the Bill Sikes' or the artful dodgers of the Five Points.

As we grow older, no doubt, we learn wisdom in this matter. The gray-haired parent, whose dancing days are over, and whose limbs are not elastic, is glad to hasten bed-time, and to leave his daughters to their foolish joy in the late hours. He would lengthen his nights in spite of his difficulty in sleeping. Very few persons over sixty years old care to sit up after 11 o'clock in the evening, and would rather be invisible at an earlier hour. Old age may not need more sleep than youth, but it is more covetous of sleep, and sooner disgusted with the day's excitement. "Go to bed early" is the advice which the elders give to the younger race, all the more emphatic as they remember their own sins in this kind in the former years, and wonder that they could have taken such needless risks in those night-rides and frolics. That is the advice, too, of the medical journals and men;—was there ever a wise physician who would counsel his patients to sit up until midnight, as a rule, or even as a frequent exception? The wisdom in this matter, nevertheless, is of the kind that comes by experience, and the sage warning of the elders is oftenest unheeded. So long as Fashion justifies and demands late hours, the gray-beards and the doctors will spend breath to no purpose. The discovery of Petroleum has neutralized the warnings of Hygiene, in furnishing light so cheap and so abundant. Early hours in a town which has its gas works are not to be thought of. Shall the enterprising company so be cheated of its profits, and the

smart village curtail its brilliancy, and keep the former evening darkness of its rural life? If for nothing else, let us sit up late, that we may not seem niggard in our use of light, and that the benighted wayfarer may take heart when he sees this beacon in the distance. Those who are determined to keep late hours can find many excuses, in spite of the contradiction of the proverbs, the doctors, and the experience of the elders.

The suggestions that we offer in this matter will probably not be heeded by young men and maidens in "good society," since they deny, so positively the customs of good society. We limit them to the round number of *ten*, although that number might as well be doubled.

1. *Go to bed when you are sleepy!* Do not undertake to force wakefulness, when attention fails and the brain finds its blood running sluggishly. One may be sleepy, indeed, where it is not expedient or proper to let nature have its way, as in waiting upon a dry lecture or a dull sermon; and a considerate pastor, remembering how hard it was to write the tedious paragraphs, will pity rather than condemn those who are overcome by their heaviness. But in the night, drowsiness is the best monitor of bed-time. One who is half asleep is, as the Western men say, "of no account" in amusement or conversation, and would better be wholly asleep. It is no compliment to a host or to a guest to listen vacantly or with drooping eyelids, to words which lull while they leave no other impression. When one can not keep awake without a painful effort, it is time "to retire," no matter how early the hour of evening. And it is the part of politeness to propose that to a guest who may show drowsiness in manner, even if late hours be the rule of the family; as the opposite rule still more holds good, that a guest should never, to accommodate his own habit or whim, derange the evident order of the house where he is received, or keep them beyond their accustomed hours.

2. *Go to bed when you are tired!* One may be fatigued without being drowsy, and may wish for the freedom and relaxation of a couch, and it is only a sin against nature to sit up in such a condition. Often sleep comes reluctantly to the tired frame jaded from long travel, or the tired brain vexed by much excitement. Yet the bed is better for these than any attempt to keep up appearance of comfort in the drawing-room. A tired body, or a tired spirit, has a right to its rest at any hour, either of day or night. One need not be ashamed to confess fatigue as a reason for leaving the company in

the midst of its hilarity. There is no glory in that martyrdom which keeps tired men and women on their feet when they would fain be in their beds.

3. *Late evening suppers should be shunned.* It is not good to cram the stomach with food before going to bed, or to make a solid dinner the preface to a night's repose. In spite of the fashion, in spite of the temptation of these boned turkeys, and these salmon-salads, and these oysters in every shape, and this dashing away of costly delicacies, we still insist that it is not good to yield to this temptation, and to outrage the digestive function with these solids at 11 or 12 o'clock at night. The supper-room at evening parties, fascinating as it is, is a snare of Satan. Many of those who are busiest in it know they are committing sin, know that they are destroying the privilege of their night, and that they are preparing for headache and heaviness in the coming day. Light fruits in the evening may do no harm, and rather bring more sweetness to the sleep. The average Englishman is sure that a cracker or two and a Welsh rare-bit will give him slumber more profound. But no food of any kind amounting to a meal should be taken in the stomach, except in those rare cases where it may act as a salutary warning.

4. And this caution is even more important in regard to stimulants. "*No intoxicating drinks before going to bed.*" Perhaps the rule ought to go farther, and say, "No intoxicating drinks at any time." Waiving that now, we may insist the old prejudice of a "nightcap" of punch or whisky, or even lager beer, is not to be defended. Champagne suppers are a very poor preparation for refreshing sleep. Stimulating drinks, too, which are not intoxicating, are equally to be shunned in the evening hours. In an essay of a previous series, we spoke of coffee at night as worse than wine, and we are not disposed to modify that assertion. No beverage that exhilarates, that stirs the blood, or that excites the nerves, is good as a preliminary of the night's repose. It is of no avail to go to bed early, if sleep be murdered in advance by stimulating drinks, whether they cheer or whether they inebriate. The sleep that comes from intoxication is not refreshing, but is full of nightmare and horrors, of frightful dreams, and of hideous shapes. If you must drink, drink in the morning rather than in the evening. Nectar is for labor, and not for slumber.

5. This rule against stimulants may be enlarged so as to include all kinds of excitement. If the evening is the time for amusement, of course, we may not put all kinds of excitement

under ban. But we may say that *amusements which try the brain and excite the nervous system unduly are not good before going to bed.* Half a dozen sharp games of chess are not to be commended as healthful in the hours of evening. Billiards, which give so much bodily exertion, along with the calculations of the eye and brain may be allowed even into the night; but chess in these hours is only a form of suicide. Stimulating dramas, too, are of questionable value as amusement, when they come in the evening. If the Ober Ammergau Passion play were given after sundown, its excitement to the nerves of the spectators would make it as murderous as the plan of Judas and the Jews. To look upon a tragedy in five acts, in which there is cumulation of horrid crime, unfits one wholly for the right use of his pleasant couch, substituting for healthy rest the haunting and damning visions of Clarence and Macbeth.

6. These advices, perhaps, are aside from our main subject. More directly applicable is the counsel to *get sufficient sleep in the night, to go to bed early enough to get all the rest that the system needs.* This has not been fairly ascertained, it may be said, and some persons do not need so much sleep as others. There are old men who have done in their lives a good deal of hard and of substantial work, who have only spent six hours out of the twenty-four in bed and have always been hale and hearty. With their cases before us, we still hold to the one-third rule, which will have *eight* hours for sleep, no matter how many are taken for labour. It is safer to secure eight hours than to limit oneself to a lesser allowance. No one, man or woman, need be ashamed in confessing that one-third of his life is spent upon the bed. Better uses for the other two-thirds come from that seeming waste. Seven hours may do in many cases, especially where one indulges in the luxury of the after-dinner nap; but it is safer to err on the side of indulgence here than on the side of parsimony.

7. If the hour for going to bed can not be made regular, there should at least be a *regular hour for rising in the morning.* There seems to be a provision in the human constitution by which one can wake up always at about the same hour, no matter how long he has slept. Nature conforms herself here to the human plan, and seems to second the will even when one is unconscious. The hour for getting up may be earlier or later, but it should be uniform, even it may involve loss of sleep in some unlucky nights. It is not well to make up by a long sleep in the morning for the fault of the

the home, no greater mistake in the attempt to manage a family, than the failure of the two parents to make their authority absolutely *one*. The household in which, for any reason or from any cause, a *conflict of authority* exists, is the saddest of sights to one who wishes well to children. There should be earnest conference between parents concerning the best methods and objects; there should be perfect unanimity in the general system of management adopted by them. It is unspeakably better to make some mistakes in unison, than to let the minds of children get confused as to whom they shall obey. Let the father and mother speak with one voice, if they wish the voice of either to be respected. Appeals from one to the other should never be permitted. Where this is allowed, wretchedness of many kinds ensues, and management gives place to mismanagement.

But, made as human nature is, it would be expecting altogether too much to suppose that, even when both parents are perfectly agreed, and their commands are dictated by wisdom and goodness, children will always obey. Disobedience is sure to occur. What then? What means should be used to secure obedience? Should we ever resort to corporal punishment, or rely on "moral suasion" alone?

In the first place, there should be as few commands as possible, fewer and fewer as the child grows older. The fewer commands, the fewer acts of insubordination. This being premised, I should say that the means used to secure obedience must vary with the age of the disobedient child, with his natural character, and with circumstances. In every case, appeal to the highest motive that will secure the desired obedience; but, I say it earnestly, *secure the obedience*. If the appeal to reason and conscience, and the appeal to affection, and every other form of moral suasion fails, I have no hesitation whatever in saying, that the appeal to the dread of pain is necessary. There is too much morbid sentimentality on this subject. Resort to the infliction of physical pain is often the most merciful course. I should never resort to it, if the child were old enough to feel his self-respect injured by it: but long before this period comes, if rightly managed, he will have passed beyond the age of disobedience. Obedience to a parent who is always firm, uniform, and kind, soon becomes a habit which acts like instinct; and wilful disobedience becomes obsolete. There is nothing worse than "breaking a child's will," as it is called; but this hateful result can be accomplished by other means than castigation. The infliction of physical pain, if unaccompanied

by any signs of irritation, will not beget irritation; it will come as the natural consequence of wrong-doing, as the pain of a burn follows the touching of a hot stove. No disgrace should attach to it. Immediately afterward the child should be completely restored to favor. The wrong has been done; its consequence has followed; all is over. There is no degradation, no wounding of self-respect, in a punishment thus administered. There is more cruelty a hundred-fold in many penalties thought less severe. It is only in the very earliest years that physical pain need be inflicted, if the right method of treatment be adopted at the outset. The lesson of obedience should be learned so early, that the learning of it shall be forgotten. Begin with the infant of a year old, or even less, and teach it the meaning of a simple "No—no!" The slightest possible rap on the little hand conveys the meaning. Let the tone be impressive but very gentle, without any symptom of displeasure; let the experience be repeated as often as is necessary, and the lesson is soon learned thoroughly. For a long time let that be the only command of any kind; and for a still longer time, let the only commands be SIMPLE PROHIBITIONS. The distinction between a negative and a positive command is very important; for the one can be easily enforced, the other not. The foolishness and wickedness of attempting to enforce a positive command were frightfully illustrated in the conduct of the minister, named Linsley, who a year or two ago beat his little child of three years old to death for refusing to say its prayers! One such case as this may well shock every one at the bare idea of punishing a little child. But observe the difference between a positive and negative command. No power on earth could make the little creature repeat a word. But suppose you were quietly to say "No—no!" when a child of a year old pulls pettishly at the table-cloth. He repeats the action. Without betraying the least irritation, you rap the mischievous little fingers two or three times; perhaps the offence and its inexorable consequence are repeated. How soon will it take the child to learn that pulling the table-cloth and touching the lamp produce equally certain and equally disagreeable sensations? He will not be angered in the one case more than in the other; he will cry in both cases. But you have an enormous advantage. He has to take the initiative, and draw upon himself the distasteful consequence. You are thus certain of imparting your lesson, at a very moderate cost of pain to your little disciple. He learns that "No—no!" if unheeded, means a

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

FRIDAY, June 1.

MUCH of one's enjoyment of life comes, I think, from the vivid recollection of past events or even thoughts. There are times when my mind seems specially full of pleasant memories—this afternoon was one of these occasions. I rode over to Torrence with Henry, and the road, which is always beautiful, was continually suggesting agreeable thoughts to me. A little brook by the side of the road rippling over the stones, the water very clear, and bright with lovely lights and shades, recalled the intense delight which I used to feel as a child in running water; the roses in bloom about every house, and the honeysuckle with its lingering perfume took me back to early days and scenes. And indeed almost every thing that I noticed along the way brought its own pleasant recollection. For awhile I talked my thoughts to Henry, but at length they thronged into my mind so rapidly that I became quiet and lost in reverie. From this Henry roused me by exclaiming, "Why, Annie, what makes you so quiet?" I explained to him how I was employing and enjoying the time, and we compared our experience in this matter of thought. What we can not understand nor explain, is that we are both often conscious of thinking of things entirely remote from the present time, and not suggested by any present occurrence. For instance, I may be engaged in the most prosaic of housework, when suddenly a scene from Peveril of the Peak flashes into my mind, tapestried walls are about me, and through a secret opening, where one would least expect it, a figure appears. At another time, when in a public assembly, I will all at once be transported backward twenty years, and I am sitting in my grandmother's kitchen-door eating such bread and milk as I can never taste again, for it was made the sweeter to me by my fresh child's taste, and by the beautiful accompaniments of summer twilight, sweet odors, soft and soothing sounds. Again, when engaged in interesting conversation with some friend I think of my enjoyment as a child in sleeping near a shed-roof and hearing the rain of summer showers patter upon it. These scenes appear as rapidly and unexpectedly as the views of a magic lantern. I have often endeavored to trace a connection between them and present circumstances,

to think of an accounting cause for their appearance, but have never succeeded in doing so. To-morrow I shall commence the entertainment of company. Lena Willis, whom I have not seen for so long, and who was formerly so dear a friend, is coming first.

Sunday, June 3.—Am I to blame, or is Lena herself, for a something lacking that I find in her? She used to appear to me *childlike*; she now seems *childish*, and to affect an appearance of artlessness, which does not sit gracefully at her age. A woman, although she may retain the innocence of heart that she possessed as a child, can not remain the same in manner, if she has any appreciation at all of life's noble purposes. But the time of awakening to this truth may come at different times in different lives. And I must remember too, that thoughts of personal deficiencies are probably not all on one side. Lena may, in her turn, think that I have grown staid and old, and am too matter of fact. We can not help our natures, but we can adorn them with those amenities which do so much to make us agreeable to those about us.

Monday, June 4.—Lena enters heartily into my plans for getting people into the open air, who have no means of their own to enable them to do so. This morning she gave old Mr. Welsh a ride in my low carriage, and came home quite enthusiastic over him. "Such a delightful gentleman she never knew, worth a dozen of young gentlemen." Rather a sweeping remark, and perhaps, not quite correct, as there are undoubtedly many good, reliable, intellectual young men at the present time. It has been her misfortune to come in contact with examples of the opposite character.

Wednesday, June 6.—At the meeting of the Mutual Improvement Society to-day, the subject of novel reading was discussed. There were several ladies who disapproved of it *à toto*, others were doubtful. My opinions were positive and decided, and I had thought much of them that I expressed them with some degree of earnestness.

I adduced my own experience in favor of my position. When very young, only a child indeed, I had an almost insatiable appetite for

Statements as to the Duration of Human Life.

BY E. HAY LANKESTER, B. A., OXFORD.

UNDER this heading, there is little more to be said than was contained in a celebrated but brief chapter. 'There is nothing known' of the duration of life in past time. A few years since it was the belief, based upon supposed statistical *facts*, that the potential longevity of man, that is, the expectation of life in the higher ages, was increasing, and had been increasing for a hundred years. Dr. Farr has fully exposed the fallacy involved in this supposition, which was due to life-tables, erroneously constructed by Dr. Price (to whom, nevertheless, credit is due as a vital statistician), from the mortuary records of the town of Northampton. Dr. Farr has shown that a table constructed by Price's method gives the same results to-day for Northampton as it did in the celebrated doctor's time. Moreover, the statistics of Sweden, which are very ample, extend from the middle of the eighteenth century, and furnish no indication whatever of a change. Some few facts have been adduced by Dr. Guy, which tend to show a slight fluctuation in longevity in past centuries, but are really too few in number to allow of any generalization by even the most venturesome. There is not within the cognizance of the writer a single fact of any antiquity to help us materially in the inquiry, unless it be thought that the limitation of life to seventy or eighty years in the Psalms is a smaller span than such a writer would now assign; but this supposition is not worth further consideration.

It is very well ascertained that *average* longevity has immensely increased since the Middle Ages, in Europe; the question, however, of mortality clearly does not come within the limits of this essay. It would be very satisfactory could some general relation between high average longevity and high potential longevity among men—i. e. small death-rate at early and late ages—be established, but the facts are conflicting, and deductive analysis renders it improbable that any constant relation does obtain, as was pointed out in treating of longevity in organisms generally.

THE INFLUENCE OF VARIOUS STATES OF CIVILIZATION.

We have seen that the influence of civilization can not be fairly examined inductively, but

the facts quoted, and the conclusions they offer, warrant us in supposing that a civilization of the highest order, in which the efficiency of the community and the efficiency of the component individuals is greatest—in which there is the most harmonious action, the greatest happiness for the greatest number, the least excessive expenditure with the least luxury, where regularity and temperateness are innate characteristics, will be that state of civilization most favorable to longevity. It may be supposed by some that since the tendency of civilization at present is to call out increased mental expenditure, that even when the other conditions of longevity are complied with, future men will rather lose than gain in longevity. This, however, depends upon the assumption, which we have no ground for allowing, that the structural capacity for such requirements will not increase simultaneously. There is every reason to believe that it will—that it is so doing. We are now in the midst of a struggle—in a transition state—which is really causing a survival of the fittest, operating chiefly through the emulation of communities, but also on individuals, and by means of this struggle greater mental power is being added to the human race. As we had occasion to remark in the case of organisms generally (quoting Mr. Herbert Spencer), increased difficulty of life-conditions necessitates increased evolution, and this is true for man's mental progress as for general structural progress. Were the evolution not always in advance of the provoking cause, we might anticipate the extinction of humanity by the excessive competition and excessive difficulties of existence which must accompany increased population. More justly, as it appears, and more hopefully, we may look forward to a time when, the whole earth being peopled, man will become finally adjusted to his conditions by the limitation of his expansion and the closer interaction of the members of the human aggregate. In that almost perfect civilization—where the greatest happiness for every individual must finally be attained—will man's longevity be extended? It does not seem improbable that this may be the case; and certainly an average longevity coincident with the potential is, under those conditions, to be looked for. Men would no

view of her disease, adopted after consulting the opinions of her friends. By the way, most of her friends are Americans, for she is too belligerent to keep any Irish friends.

Some time ago I looked over a large and popular work upon Homeopathy, the author's name escapes me, and I came to the conclusion that there was little need of physicians to practice this branch of medical science. The course of treatment seemed to be the same for all diseases, to administer any remedy you might choose for any disease; and, if that did not cure, to try another, and then another, and so on, through the entire list of Homeopathic remedies, until the patient was beyond the necessity of further treatment, one way or the other. Madge, by the education of nature, has adopted the same course with Allopathic remedies. Castor oil, tincture of muriate of iron, catnip, peppermint, paregoric, pennyroyal, boneset, quinine, and the ordinary cholera medicines are varied by the application of mustard and bran poultices, bags of hops, plasters, liniments, and Dalley's Pain Extractor. Pills were much respected by her, until she almost killed herself with an overdose of Gräfenberg's Vegetable Pills. Consumption is an unfailing resort, and, when afflicted with this, she goes about the house with a less elephantine tread, speaks in more subdued tones, coughs gently when any one enters the kitchen, gives utterance to frequent moral reflections upon the shortness and uncertainty of life, and often shows her hands and arms to us that we may see how she is wasting away. She is of the common Irish build, all wide and no long, and imagines herself to be exceedingly small and delicate. She looks at her hands, spreads them out before our eyes and says, "Ah now to look at the little delicate hands, wud any one think they could do so much wurk?" She can never get a ready-made shoe to fit her, which is, as she maintains, in consequence of her foot being so small—i. e., so short, and broad, and thick. Lena's amusement is at its highest point in noticing the way in which Madge accommodates herself to all sizes of cast-off dresses. Nothing comes amiss to her, from Lena's dresses who measures eighteen inches round the waist, to my own capacious ones of twenty-seven inches. She has been detected in letting out the last mentioned ones, but it was "only because they were not the right shape for her figure." The eighteen-inch dresses she wears open with a sacque over them, for she "can not wear any thing *just to fit her*, she thinks it must be because she has the dropsy."

Saturday, June 9.—I spent this morning in clearing Mary Morgan's little flower-bed from weeds. It is just where she can see it, as she lies in her bed by the open window, and I am sure will give her much happiness. I have given her a few plants, a dark heliotrope, a lemon verbenia, a lovely rose which blooms almost continually through the summer, a rose geranium, a geranium with a pink blossom, six pansy plants, and six verbenas of my seedlings. With these she can have a fine show.

I have a great many applications for cuttings of my plants from the poor people of the place. Last summer I kept a large bed of clear road sand, which I had thoroughly washed, and in which I put slips from my nice plants, whenever I could spare them. In this way I had a sufficient supply for all my neighbors, and it was very pleasant to give them things which they have been accustomed to look upon as beyond their reach.

Apocryphal of this subject of flowers, I had a singular dream a few nights ago. I seemed to be walking in a garden, and by my side walked Martin Luther, discoursing to me quaintly, pleasantly, and instructively upon the various branches of horticulture. Of course it seemed perfectly natural, as every dreamed-of occurrence does.

THE SOUL'S DISCIPLINE.—Religion is the discipline of the soul, through sorrow and joy; through evil and good. It is the baptism sometimes of great sorrow, and the cup sometimes of intense bitterness. The object of religion is, through all the good and evil, the ever-varying interchanging conditions of life, to make us not merely happier but better. How many are there who consider it a passport by which to escape hell and get into heaven, some sort of badge by which to escape the evil and get the good. Truth may be sought not only for itself, but for selfish ends. Do we seek religion as a vehicle or arbitrary condition? Do we seek religion because it will land us in heaven at last? It will never land us in heaven, until we find heaven in ourselves. Religion is itself is goodness, truth, righteousness and love.—*Chapin.*

A SPIRIT of innovation is generally the result of a selfish temper and confined view. People will not look forward to posterity who never looked backward to their ancestors.—*Lord Fellen.*

Make Home Pleasant.

BY M. A. K.

FOR their sakes, your sons and daughters,
Ever present,
Looking up to you, their parents,
Make home pleasant.

Let them have no cause to wander
Or to linger
Where sin beckons with her ready
Tempting finger.

Though you may not pet and pamper
Self-indulgence,
Let home firelight shed its glory,
Blest refulgence.

As your heart yearns for the comfort
Of your treasures,
So their young blood, running riot,
Yearns for pleasures.

Give them these, with prudence tempered,
Flowers of beauty,
Such as once you plucked in youth time;
'T is your duty.

Starve them not on folly's diet,
Evanescent;
Yet use wisdom with your license,
Make home pleasant.

Be Not Discouraged.

THEY say the professions are crowded
By seekers for fame and for bread,
That the members are pushing each other,
As close as their footsteps can tread.
But be not discouraged, my brother,
Nor suffer exertion to stop,
Though thousands are pressing around you,
There's plenty of room at the top.—S.L.

parent must continually exercise this right of control over his child, or else allow other persons to be continually annoyed and disturbed by him. Every one who has ever been in a house where the children are uncontrolled, will appreciate the force of this argument; and every one who has ever watched children at play together will appreciate it with almost equal vividness. Surely the child's right of self-government can not include the right of making himself a pest to every grown person about him, and a tyrant to every child he plays with. Yet the only remedy for all this lies in the continual abridgment of his right of self-government by parental control.

But I deny that the child does possess the right of self-government enjoyed by the well-behaved adult, because no child, left wholly to itself, ever was or will be well-behaved. On what is this right in the case of the adult based? Clearly on his having a developed conscience, reason and will, which prevent him, even in the absence of external constraint, from injuring or annoying other people. But the conscience and reason of the child are not developed, and do not prevent him from thus trespassing on the rights of others. His will is strong even to imperiousness, while his conscience and reason are exceedingly feeble. I maintain that the right of self-government depends on a certain degree of development of these latter faculties. The very young child, as I said before, is an animal, with no more right of self-government than an animal; the child of somewhat larger growth acquires somewhat of this right, which should be respected; but it is not until maturity that his right to self-government becomes perfect. When the youth has learned to govern himself by conscience and reason, his right of self-government is then complete. Every human being begins his existence without any right of self-government at all, because he is utterly unfitted to govern himself alone; he ends, at maturity, by having this right unquestioned, because he has learned how to exercise it. Clearly the transition from one extreme to the other must be gradual. That is, he must begin by being under parental control; he gradually acquires the right of self-control, and then enters the arena of life, a free and developed human being. However unpopular with "young America," I fear that this conclusion can not be escaped.

The ground I take, then, is this, that it is the duty of the parent to control his child, until the child is fit to control himself; and that the parent's control should be directed constantly

to the one aim of developing in the child this power of self-control, by developing in him his natural individuality. To teach the child how to govern himself by conscience and reason, and, in order to carry out this purpose, to educate his conscience and reason as rapidly as Nature permits, without resorting to any household culture, this I conceive to be the duty of the parent in the management of his offspring.

So far, then, as management is concerned, the relation of parent to child can be tersely stated. The parent is to his child *an external conscience and reason*, whose authority continues until the child's internal conscience and reason are developed. Precisely in proportion to the degree of this internal development, the rightful control of the parent ceases. Parents too seldom perceive this natural termination of their authority; the habit of command, reinforced perhaps by the child's love of power, blinds their eyes to the growth of the child's mind, and they usually err in prolonging unduly the period of subjection. The law, I think wisely, prescribes a limit beyond which parental control shall not extend, namely, the age of twenty-one years. This limit is sometimes too early, sometimes too late; but, on the average, is perhaps about right. The wise and conscientious parent, however, will not be wholly guided by the law; if his child earlier becomes mature, he will relax all control before the legal limit is reached. He will never forget that his only *right* to govern his child depends utterly on the child's inability to govern himself, and that to prolong his authority unduly is simple tyranny. Furthermore, to use his authority for any selfish purpose, for any purpose but the child's best good, is to be false to his duty as the child's external conscience and reason. He has no right to domineer even over his own flesh and blood; he is a trustee of power, and is responsible to his child for its right use. The obedience he exacts is only the child's first lesson in self-control, obeying the external conscience and reason blindly before he can obey the internal conscience and reason with open eyes. Obedience always implies exercise of the will; and it is by obeying the command of his parent that the child's will acquires the power to obey the command of the inward monitor at a future day. Obedience, therefore, is the child's peculiar virtue, his schooling in the grander virtue of spiritual self-control. Thus the wise and good parent purposely commands that he may at last cease to command; the dutiful child unknowingly obeys that he may at last cease to obey.

There can, I think, be no greater disaster

STUDIES IN HYGIENE.

MORAL HYGIENE.—

Put out thy talents to their use—

Lay nothing by to rust;

Give vulgar ignorance thy scorn,

And innocence thy trust.

Rise to thy proper place in life—

Trample upon all sin,

But still the gentle hand hold out

To help the wanderer in.

So live, in faith and noble deed,

Till earth returns to earth—

So live that men shall mark the time

Gave such a mortal birth.

QUERIES IN HYGIENE WITH ANSWERS.

—1. What effect does tobacco and alcohol have upon the young?

ANSWER.—Generally, it impairs growth. The report of the British Factory Inspector contains a statement made by the certifying surgeon at Bolton-le-Moors, that the children of the mill population are year by year getting smaller, and physically less capable of doing their work. He attributes this partly to their being the children of intemperate parents, partly to their being brought up on tea and coffee, instead of more substantial food, and partly to the circumstance that many young children, of about twelve years old, begin to smoke, acquiring the habit from their fathers, and possibly from their mothers.

2. Are the negroes of the South temperate and healthy, or the reverse?

ANS.—From several sources we learn that they violate nearly all the laws of health, and are suffering seriously for it. The remarkable official statement from Columbus, Ga., bearing a recent date, is made, that out of a population of six thousand whites and three thousand blacks, the burials for three months were: white adults, 13; black adults, 18; white children, 12; black children, 36. The proportion of deaths, taking into consideration the number

of white non-residents buried, is nine whites and forty-eight blacks. The proportion of deaths for respective numbers, it will be seen, is one white to ten and two-thirds blacks.

This statement may not be true, but from what we learn we fear it is.

3. What is Chloralum, the new disinfectant?

ANS.—It is an impure solution of chloride of aluminum, sp. g. 1.150. It contains, in a pint, 1500 grains of the chloride=75 grains in the ounce. It was introduced as a disinfectant and antiseptic by Prof. Gamgee, and is highly commended by chemists and physicians, as being less poisonous than carbolic acid and equally powerful. This latter is not certain, however, though there is no doubt of its high value. It is diluted with ten parts of water to one of the Chloralum, and sprinkled over the surfaces of places needing disinfection.

4. Do you recommend the use of carbolic acid as a disinfectant, or for other purposes?

ANS.—Besides its value as a disinfectant it may be used for many purposes.

In pasting wall-papers, posters, etc., especially where successive layers are put on, there arises a most disagreeable effluvia, which is particularly noticeable in damp weather. The cause of this is the decomposition of the paste. In close rooms it is very unwholesome and often the cause of disease. In large manufactories, where large quantities of paste is used, it often becomes sour and offensive. Glue, also, has often a very disagreeable odor. If, when making paste or glue, a small quantity of carbolic acid is added, it will keep sweet and free from offensive smells. A few drops added to mucilage or ink prevents mold. In whitewashing the cellar and dairy, if an ounce of carbolic acid is added to each gallon of wash, it will prevent mold and prevent the disagreeable taints often perceived in meats and milk from damp apartments.

longer "die of disappointment," but would attain eighty or a hundred years. There is no apparent reason why longevity should not increase beyond that limit, and advance with advanced evolution, and the diminished expenditure implied in more complete adjustment.

It has been asserted by a writer in *Frazer's Magazine* (September, 1869), and indorsed by another writer in *The Spectator*, that civilization acts so as to suspend Darwin's law in the case of man—the feeble and diseased being allowed to breed, and the inferior often inheriting wealth won by no merit of their own, which could not be the case were there a free struggle for life and consorts. This is supposed to tend to shorten the life of the species, and to produce general inferiority in civilized races. But the argument is based on fallacy. As we have pointed out, man is a social animal, and the social virtues, which are urged by some persons as a cause of deterioration, are the very strength of the communities in which they have been naturally and necessarily developed. That "the individual withers, and the world is more and more," as sung by Tennyson, is profoundly true. Natural selection operates largely on communities of men in place of individuals. That the fitter do survive, even in the case of individuals, is, however, clear enough. The diseased and feeble who propagate produce some healthy children, and these surely and certainly marry sooner and live longer than the unhealthy offspring, so that a very minimum of injury is done to the race by warding off the selective destructiveness of disease; inferiority must produce its legitimate results in spite of man's interference. Moreover, the mixing of stocks, with a tendency only to certain diseases, may be a source of strength, implying as it does, mixture of varied constitutions. The tendency to particular diseases, under given conditions, is not a proof that under all conditions which may arise there will be that tendency. If the conditions are changed, as they are rapidly changed in the progress of civilization, what was weakness may become strength, a constitutional tendency to one kind of disease being associated with immunity from other kinds. Little is known on this matter; but compare the ravages of small-pox among Africans, of syphilis among Europeans, and the immunity of the Maoris from any severity under these diseases. The effect of sanitary action in preventing the natural elimination of "fermentable" matters from the blood (Paget) of generations is a curious subject for speculation. Zymotic diseases, if allowed to run their course unchecked in a

community, kill off those individuals most imbued with this supposed fermentable matter, or remove it from those who recover from their attacks. If zymotic diseases are kept off, will not the "fermentable matters" increase from generation to generation? It seems as though such elimination as vaccination should be adopted, together with sanitary measures, or we may accumulate a nidus in the veins of posterity. Possibly, if exempt for great length of time from a disease, a species may become no longer subject to it, just as two closely allied species of animal, *e. g.* the sheep and ox are no longer subject to the same diseases, though presumably descended from a not remote common ancestor.

DR. MOFFAT's paper, read before the British Association at Edinburgh, last month opens up a large and suggestive field. The subject was "The Geological Systems and Endemic Diseases;" and he showed that goiter and other endemic complaints were very common among dwellers on the Carboniferous system, while it was almost unknown on the Cheshire or the New Red Sandstone. As anemia is a state in which there is a deficiency of oxide of iron in the blood, Dr. Moffat examined chemically the relative composition of wheat grown upon soils of Cheshire sandstone, carboniferous limestone, millstone grit, and a transition soil between the Cheshire and sandstone and other grit. He found that wheat sown upon the New Red Sandstone yielded the largest quantity of ash, and that it contained a much larger quantity of phosphoric acid and oxide of iron than that grown upon the other formations. It was shown, too, that wheat grown upon Carboniferous soil was deficient in phosphates and nutritive salts. The experiment was next tried of analyzing twenty samples of bread used by as many different families living on the respective formations, and the results tallied completely with his previous observations. There was, in fact, a marked deficiency of the nutritive salts in the bread, owing, no doubt, to the removal of the bran from the flour with which the bread was made. The deductions that Dr. Moffat drew from these facts were, that persons of anemic or strumous habit should, if possible, be transferred from a Carboniferous to a Red Sandstone soil, and should be dieted as far as possible with food which contained the maximum quantity of oxide of iron and phosphates or nutritive salts.—*Food Journal*.

can the friends bring suit for damages and recover?

Ans.—An apothecary (N. Y. Times, August 1, 1871) in one of the interior counties of New York has been sued for damages by the husband of a woman to whom he sold laudanum to be used as a beverage, and the Supreme Court has decided that the suit can be maintained. The plaintiff avers that the apothecary supplied his wife with the narcotic day by day for six months, knowing the use she made of it, and that he was put to great expense in repairing the injury thus occasioned to her bodily and mental health.

12. What causes Hydrophobia in dogs?

Ans.—A Russian anatomist has been looking into this matter, and in all the dogs examined by him he finds serious diseases of some of the organs, especially of the kidneys. In every case, he says, a well-marked parenchymatous inflammation of the kidneys was observed, the peculiarity of which was that the changes of the epithelia of the urinary tubules were equally distributed over the whole organ, the cortical portion of the kidney being equally affected with the pyramidal, so that all the conditions for the occurrence of uræmia were present. It is therefore probable that many of the symptoms of hydrophobia are really due to uræmia. The alteration of the epithelia is for the most part of a degenerative character. In those cases in which the disease had reached its greatest degree of development, the urinary tubules were entirely stripped of epithelial cells, but were filled with a granular and fatty detritus.

CIDER AND THE EYES.—If I am not mistaken, I penned a short article for The Advocate a few years since, calling the attention of its readers to the peculiar influence of cider upon the eyes of those who use it freely for some years. In looking over, a few days since, a file of The Temperance Standard, published in Boston twenty-six years ago, and edited by Daniel Kimball, Esq., I came upon a communication of mine to that paper, dated December 14, 1845, in which I first called the attention of my fellow-laborers to the subject under consideration. The question as to who first applied steam-

power to the propulsion of boats has been sharply debated, as also the question as to who was the fortunate man to whom the world is indebted for the first successful employment of ether as an anæsthetic. And lest there should be hereafter some doubt as to who first called attention to the important subject embraced in the heading of this article, I have given the precise date of my first communication on that subject, and add hereto a brief extract from the same. I had been laboring in New Haven County, and in my report of the labor wrote as follows:

"I saw more cider-mills during the three weeks I spent in New Haven County than I have seen in two years while laboring in Massachusetts. As a result of large orchards, numberless cider-mills, and the free use of cider, many of the citizens of that region are limping with rheumatism, and every now and then you meet a man of sixty or thereabouts whose under eyelids have lost their elasticity, and hang off from the eyeball, showing the inflamed lining membrane of the lid. Reader, place a finger on each side of your nose, an inch therefrom, and half an inch below the eyes, then with slight pressure of your fingers, draw down, both lower eyelids until separated from the eyeballs about one-fourth of an inch; now look in the mirror and you will see a tolerable representation of an old cider-drinker's eyes, bating the red and inflamed appearance of the mucous lining of the lids. You may say, perhaps, that old age has wrought the change in question; but I tell you that in more than three-fourths of the cases where such changes are wrought it is not old age, but old cider that pulls down and inflames the lids."

I will now add, that fifty years ago, when cider was the common drink of Connecticut farmers, as many as every third man above sixty exhibited the fallen and inflamed lids.—Charles Jewett.

DETERMINED TO DIE RICH.—An English magazine recently published an account of the wreck of the ship Britannia, which struck on the rocks off the coast of Brazil. She was freighted in part with Spanish coin, packed in barrels. At first the crew hoped to save these, and hoisted them up from the hold on deck; but it soon became evident that the ship was fast sinking, and they were obliged to take to the boats. Just as the last boat was pushing off, a young midshipman rushed back to make sure that no one was left by accident to perish. He found a sailor seated flat on the deck, with a hatchet in his

ness and neglect of the teeth, and thus cause an irreparable permanent blemish.

Sugar, in moderation, does no harm to the teeth either of children or adults.

There are two essentials for preserving the teeth in good order.

1. Keep them clean.

2. Employ a good dentist when necessary. As for the first of these, Dr. Meredith is thorough, indeed. I shall transcribe a passage, to show how thorough, and how sensible, too, for that matter:

"To secure proper cleanliness, pleasant taste, and purity of breath, the teeth ought to be cleaned *five times* a day; once after each meal, once before retiring, and once during the morning ablutions. In the morning the brush and good powder should be used, and the mouth rinsed. After each meal all particles of food should be picked from between the teeth, and then the brush and clean water will be sufficient. At night the brush and water will answer, occasionally using a little Castile soap, and rinsing the mouth. The best tooth-pick is one made from a quill, but after using it should not be kept in the mouth the balance of the day, till it is mashed into a ragged brush. The toothbrush should be applied so as to reach *every accessible surface* of the teeth, and so as to brush the food from between them; therefore it should be used backward and forward, and from side to side on the grinding surfaces, to clean out all the depressions, and upward and downward in the divisions between the teeth, inside and outside. Once or twice a week, or oftener, a silk thread armed with powder should be drawn between all of the teeth. So well do people generally appreciate the necessity of keeping the teeth clean, that about one in ten thousand takes such care of them. One of a thousand, probably, goes through the form of cleaning them three times a day. A greater number clean them once a day, and that in the morning, allowing the food from three meals to accumulate, putrefy and ferment all day and all night till the next morning again. But the great majority of people don't clean them at all—and glory in it after. Many that do pretend to brush the teeth, rattle the brush along the row, just as a boy rattles his stick along the palings. This does about as much harm as good, packing the particles of food and decomposing mucus nicely away between the teeth, and leaving untouched the grinding surfaces. It would be just as sensible to attempt to paint a fence by rubbing the brush across the pickets, instead of up and down. Many

who have been careless with their teeth will doubtless think that to follow these directions will be an arduous duty, but the attention here advised will not require in the aggregate more than ten minutes each day; and after a little while it will assume the form of a habit, and will be naturally added to the ordinary routine of daily duties."

Excellent truth and good sense, every word of it. Go thou and do likewise.

About toothache, Dr. Meredith has a trifling definition that seems to me calculated to afford very great comfort. He calls it *Odontalgia*, to begin with, because, I suppose, the victim feels like saying Oh don't! And he is so good as to tell us exactly what makes it, as follows:

"*Odontalgia* arises mainly from sensitive dentine, irritation of the pulp by external agents, pulp nodules, periodontitis, alveolar abscess, decomposition in the pulp cavity, fungous pulp, exostosis, exposed cementum, necrosis, and sympathy." I think that the knowledge that I had all those things inside of me would reconcile me even to *Odontalgia*. I should wonder that I was alive. And let the Doctor's explanation be a warning against sympathy, particularly—though, really, I don't remember, after all, that unsympathetic people have less toothache than other folks. I do, however, remember to have seen it stated that people with toothache never get any sympathy; this is doubtless because their friends know they have had too much already, and, in fact, that's what's the matter!

It is obvious that each of your child's two new sets of teeth should be trained on Dr. Meredith's system. And a great many people would find, if they would apply his system to the teeth they have, that they would very soon feel at least as if they had a new set of teeth.

VICE.—The poison fangs of serpents "when not employed, are hidden from sight by a fold or projection of the gum." It is only as the serpent strikes that the fangs are shown. Is not this a fit emblem of vice? The deadliest vice plays around the soul with hidden fangs and long deludes us into vain imaginations of security. It conceals its venom until disclosed in the infliction of a fatal wound; and we are then awake to the consciousness of danger only when the hope of escape has perished for ever. There is no safety except in early flight and distance and abhorrence maintained throughout life.

intellectual effort. To insist on this in connection with them is to provoke rapid exhaustion and decay.—*College Courant*.

DEEP BREATHING.—If we desire to see a generation of men with enlarged brains—and if we look in our colleges, churches, courts, gladiators' chairs, legislative halls, Wall Street and the White House, all will admit we need them—we must have women with enlarged lungs, and opportunities for thought and action. Deep breathing has much to do with deep thinking.

Napoleon once said: "You can not make a soldier out of a sick man." Neither can you make a race of heroes and philosophers, saints or scholars, out of a nation of sick women.

The New York World, in a recent article on dress, says: "The average weight, all the year round, of women's clothing, which is supported from the waist, is between ten and fifteen pounds. Are weak backs a wonder?"

I do hope all physicians will stop talking of the *natural* weaknesses and disabilities of woman; there is no such thing, they are all *artificial*—the result, in all cases, of violated law. Maternity is not a weakness, but an added strength; making woman in her creative power second only to God himself. A well-organized woman, who understands and obeys physical and moral law, may enjoy a life of uninterrupted health and happiness as the man by her side. You might as well call tobacco-chewing, spittoons, delirium tremens, keno banks, and panel-houses the *natural* weaknesses and disabilities of man as to attribute all the long train of evils that flow from the dress and sedentary habits of our girls to the *natural* weaknesses and disabilities of women.—*Mrs. Stanton*.

OATMEAL.—When the writer was in Edinburgh, the celebrated Dr. Guthrie called his attention to the size of Scotch people, and to the fact that the average size of their heads was greater than that of any other nation in the world, not excepting even the English; and when asked how he accounted for this, he replied that he thought it was owing largely to their universal devotion to oatmeal.

Indeed, the writer observed that the national dish was found upon the table at almost every meal, in the houses of the rich as well as the poor. In the morning came the mush, and in the evening the traditional cake, about the size of the crown of a hat, and a little harder than a sun-dried brick.

For further confirmation on this important

question, let the writer add that he has found a great advantage to follow the daily use of (honest) brown bread and oatmeal in his family. A child whose first teeth came through in a starved condition, so that they began to decay at once and cause much suffering, is now blessed with as fine a set of second cutters as any one could ask, while the general health of all has improved. In fact, we all vote that we must daily have our brown bread and its twin-sister dish of oatmeal.

IMPORTANCE OF COOKERY.—The preparation and cooking of food should receive its proper share of attention, if the greatest amount of benefit is to be derived from its introduction in the system. Blot, the professor of this art, says that green vegetables, such as cabbage, spinach, etc., should be put in boiling water, but dry vegetables, as beans and peas should be put in cold water to cook, after having been previously soaked in lukewarm water. In the case of potatoes, the eyes or germs are to be cut out, and the skin rubbed or scraped off, then steamed or roasted. He thinks that fish, although only containing twenty per cent. of nutritious matter, ought to be partaken of at least twice a week, as it contains more phosphorus than any other food, and serves to supply the waste of that substance in the system, and particularly in the brain. He says that the brain of an idiot contains about one per cent. of phosphoric matter, that of persons of sound intellect two and a-half per cent., while that of a maniac contains three and a-half per cent. If this be so, it would seem that in a maniac the brain appropriates an undue proportion of phosphoric matter from the rest of the system, whereby its functions are materially impaired.—*Medical and Surgical Reporter*.

HYGIENE IN DIPHTHERIA.—Secure cleanliness. To diminish the media of infection, the body and bed-clothing should be changed daily. The sick-room should be bare of unnecessary furniture, and especially of drapery, and, if possible, have an open fire-place and a fire burning on the hearth or in the grate, if the weather is too cool to have the doors and windows thrown constantly open. There is not the least danger of "catching cold" in bed, if the patient is well clothed. Segregation of the sick is absolutely indispensable, and the bed should be so situated that the fresh air from out-of-doors may blow over it and thoroughly dilute the foul air of the room.—*Dr. Reeves*.

5. You often speak against the shoes we wear, but how can we provide a remedy?

Ans.—By having a last made to fit the feet and ordering your shoes made over them. It costs more at first, but is cheaper in the end. The shoes and boots of commerce are ruining the feet of the people. Shoes should be made to fit the feet, and not the feet to fit the shoe. We never buy ready-made shoes.

6. Are potatoes wholesome after long exposure to the air?

Ans.—No. Even a short exposure to air and light spoils them for food. The Food Journal says: "The use of potatoes is a preventive against scurvy, if not an actual cure for it. Potatoes that have been exposed to the air, and have become green, are unwholesome; and new potatoes, i. e., unripe ones, have much to do with the prevalence of cholera, and such like diseases, during the summer months."

7. What is bird's-nest soup?

Ans.—It is a Chinese dish, and is made from a species of swallow's-nest. The Food Journal says of these nests that "chemical analysis has shown that they contain ninety per cent. of animal matter, so that it is now considered pretty certain that these interesting nests are composed of a matter secreted by the birds at the period of nidification, which matter is analogous to that which the common swallow secretes, and with which it plasters together its mud nest."

8. Are there any Golden Rules for smokers?

Ans.—Yes. 1. A perfectly healthy man does not need to smoke. 2. A sickly man had better not smoke. 3. A woman should never smoke. 4. A man who can get enough to eat should not smoke. 5. A man with disordered digestion, diarrhea, or a foul tongue, should not smoke. 6. A man who does not love tobacco should not smoke. 7. A man who loves it had better not smoke. 8. And finally no one should smoke. This last may be considered the Golden Rule. Obey it, and we may sooner expect the Golden Age.

9. In eating grapes, apples, cherries, and other

fruits with small seeds, may one safely swallow the stones or seeds?

Ans.—It is best not to do it, of course; one may do it and not be harmed, but no good comes from it, and sometimes great danger. A person, for instance, who eats a pound of Catawba grapes and swallows the seeds, takes into the stomach four large hard stones to each grape. Now count the grapes to a pound and see how many there are. Now collect the stones, or seeds, together, and see what a pile it makes!

10. What do you think of the new drug for curing cancer, called Cundurango?

Ans.—About as follows:

"The morning sun was shining bright
As lone upon old Georgetown's height,
A Bliss-ful doctor, clad in brown,
Desiring wealth and great renown,
Displayed aloft to wond'ring eyes
A shrub which bore this strange device,
Cundurango!

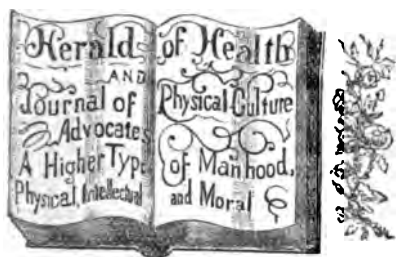
"A maiden fair, with pallid cheek,
With ardent haste his aid did seek
To stay the progress and the pain
Of carcinoma of the brain;
While still aloft the shrub he bore,
The answer came with windy roar,
Try Cundurango!

"A matron old, with long unrest
From carcinoma of the breast,
This Bliss-ful doctor rushed to see,
And begged his aid on bended knee.
The magic shrub waved still on high,
And rushed through air the well-known cry
Try Cundurango!

"The evening sun went down in red—
The maid and matron both were dead;
And yet through all the realms around,
This worthless shrub, of mighty sound,
Will serve to fill the purse forlorn,
And cancer succumb—in a horn—
To Cundurango!

11. If a druggist sells a person a poisonous drug to be used habitually, as morphine, for

EDITORIAL DEPARTMENT.



NEW YORK, NOVEMBER, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

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BY M. L. HOLBROOK, M. D., EDITOR.

HEALTH HABITS AND AMUSEMENTS.—

A LETTER FROM P. T. BARNUM.

DR. M. L. HOLBROOK—*Dear Sir*: Your letter, asking me to give some account of my habits of life, and, particularly, the relation of amusements to health, as I view this subject, has been mislaid; but I will answer the points with as much brevity as possible.

You do not need to be told, I trust, that the first article in my Hygienic creed is Total Abstinence from all that Intoxicates. I hold alcohol to be a poison always and everywhere—a vile enemy to the human system—and believe that the American habit of guzzling down enormous

quantities of the various compounds in which this, and other equally deleterious ingredients exist, is one of the crying sins of the age. It is destitute alike of morals and of health.

I am asked sometimes why a moderate use of liquors should be condemned, and told that it is the *abuse* and not the *use* of them that is harmful. But I believe alcohol to be deleterious in itself, and unfit for use in the way suggested; viz.: as a beverage or pleasant stimulant. If it were not for the pernicious fashion set by families who wish to be convivially social, and think that wine and other liquors are indispensable to this end, we might more easily make alcohol the natural outlaw which it is; whereas, with this *quasi* brand of respectability given to it at dinners and parties, it flourishes, conferring the inheritance of drunkard almost always to some member of the family in which it finds welcome, or to succeeding branches of it.

The doctrine of Total Abstinence I believe to be necessary to health, because it is the only safe line that can be drawn. If you may drink a little, you may drink still more. And who shall say where the moderate limit ends? You can no more have moderate drinking than you can have moderate forgery.

I am further confirmed in this view by the facts of my former experience. I once drank wine and know that it never did me any good; that it was always either worthless to me or a positive injury. And, I find by late and larger experience, the human system as it came from the mould of Nature has no need of this fiery *ichor*—or Devil's elixir more properly—to support it, and keep it in working order. Of course, there are arguments for Temperance which I can not even name, much less illustrate, in so brief a letter as this; and there is none at all which successfully opposes it in the minds of candid and intelligent men.

Next to Temperance, I should place Cheerful-

ness as the greatest ally of good health. And this brings me to what I have to say of Amusements.

I suppose it will be thought because I am a showman by profession, that I must therefore countenance the Drama in all its unlicensed broadness, and every thing which promises to cater to human diversion and interest. But, frankly, I do not. There are amusements which are edifying, instructive, curious, and mirthful; and there are those which may partake of these qualities in certain degrees, which are corrupting and immoral. I make no war with the theatre *per se*; but I oppose every thing, dramatic or otherwise, which can not be produced before the whole family, and be a fair subject of discussion in the choicest circles. A moral play, or one which amuses and relieves the mind is not objectionable to me though on the theatre boards; but a play, exhibition, or speech of any kind whatsoever which will bring a blush to the face of purity, is to be sternly condemned. Late hours, and unventilated rooms, are also to be avoided as fruitful accessories of harm. In my opinion they go far deeper than to merely undermine the health, for they help powerfully to disturb the moral order of those who are subject to them.

The sad, careworn look of Americans is proverbial. Our very air is charged with electricity, and we are all in a furious hurry. Our holidays are few, and are generally taken with a sad longing over the ledger—not Mr. Bonner's—which is left behind. We ought to have more holidays, and make joy frequently a religious duty. Innocent games, playful or other, carried on with moderation, merely for mirth and hilarity, are wholesome of themselves. They add, I am certain, not only to human happiness, but to length of life; and make even the hours of labor of far more value. The ecclesiastical teaching of former times was most unwisely, as I believe, put in a hostile attitude to amusements; and we yet inherit in some degree, from Puritan traditions, the idea that a long face and Pecksniffian gravity are the fit expression of religion itself. But the sons of

the Puritans have done something toward setting this matter right. Though a blue-eyed or morbid conference may occasionally discuss the sinfulness of croquet, or other equally mild diversion, I rejoice to know a better feeling is obtaining in respect to amusements, and look forward to the day when it shall be the duty of the Churches to provide them, instead of struggling to put them under ban. Life, at best, has its quota of weariness and toil; its cares choke out the sunshine to which the heart has a natural right, and he who hinders any suitable expression of mirth or joy is a foe to human welfare no less than to human health.

When my Museum burnt down I took Horace Greeley's advice, "to go a-fishing"—that is, metaphorically; and though I manage through trained subordinates to carry on considerable work, a large part of my time is spent in the delights of my country retreat at "Waldemero," my new summer residence at Bridgeport, or in social ways among my neighbors and friends. I can not be absolutely still, for want of occupation is spiritual death, and, to me, torture; but I who once "lived laborious days," now command many hours for myself alone, and take my *otium cum dignitate*; or, as the boy translated it, "eat my oats with dignity."

I rise promptly at 6½ o'clock, and earlier when necessary, and usually retire before 11. I eat freely of such wholesome food as the market affords—too many kinds, possibly, but not more than I crave; and observe regularity and system in all that I do. The "clam-bakes," which are an established and delightful form of picnic here, are one of my especial indulgences, and with the alternate exercise and breezy salt air, would form no very unsuitable adjunct to a health institution. At my regular table I make it a prime point to have no conversation but that which is cheerful and pleasant. Every joint is carved with a joke, while puns put forth with perfect impunity give piquancy to the palate.

Cleanliness and frequent bathing I regard as cardinal virtues, and I have every appliance for

securing these in my city residence in New York, and in my summer one already alluded to. Tobacco I detest—not equally with alcohol—and, practically, I abstain from it *in toto*. It is not only unclean, but hurtful and expensive, and not fit for the use of a civilized race. Fashion, not Nature, prescribes the habits of smoking and chewing, and they are attained only through nausea and illness. The first appearance at their shrine is generally the signal for “offering up” a prompt sacrifice.

My favorite exercise is riding; and I usually take several brief rides each day, at regular intervals—having some purpose, of course, in view, and in the country drive my own horse, or horses—keeping, usually, about six in my stable. The vicinity of Bridgeport is famous for its fine drives; you can go a dozen directions with interest; the breezes from the Sound are fresh and stimulating; and this pleasure does not cloy by repetition. I once accustomed myself to walk before breakfast around our Seaside Park—distance a mile and a half—and derived some benefit. But walking is better fitted for some constitutions than for others, and in this practice each individual must study his own peculiar nature and strength.

You may be interested to know, possibly, that I tried on one occasion—when I thought I was too corpulent—Mr. Banting’s system of growing lean. I got off twenty pounds very soon by following his rules; but, feeling no particular benefit from the reduction, I returned soon to my old diet and weight.

If I have any thing more to add to my theory of living, it would perhaps be a brief summary of my whole creed.

And these are its articles:

Abstain wholly from liquor and tobacco. Be temperate in all things. Remember that cleanliness is next to godliness. Be cheerful and unselfish. Do not let care corrode your heart. Do your duty as your conscience prompts, and leave results to Him who alone can control them to the furtherance of His designs. By so doing you will have—so far as human means

can contribute to it—health, long life, and substantial happiness.

P. T. BARNUM.

WALDEWEE, BRIDGEPORT, CONN., Sept. 25, 1871.

IMPURE AIR AS A CAUSE OF DISEASE.—

Among the manifold causes of the various forms of disease which afflict mankind, there can hardly be mentioned one more potent or constant than a vitiated, noxious atmosphere. Especially is this true of large cities, where the exhalations from a thousand different sources combine to fill the air with poisonous gases, which, being constantly inhaled, plant the germs of disease in the lungs, impoverish the blood, and, in many instances, undoubtedly hasten the fatal termination of otherwise remediable diseases. It is impossible for even the most vigorous constitution to long withstand such a blighting influence. Its effects may be seen any day in the pale, cachectic countenances of the habitual dwellers in crowded cities, when contrasted with the ruddy, healthful cheeks of those who live among the breezy hills and wide open fields of the country. This difference of atmosphere was made strikingly apparent not long since, while approaching New York on the day-steamer from Albany. The passengers were mostly assembled in the forward part of the boat, enjoying the magnificent scenery of the noble Hudson, and drinking in the delicious, health-giving air from the grand old mountain slopes; and while the great city was yet miles away, and its whereabouts only manifested by the thick cloud that hung above it, there suddenly came an odor upon the wind that was like any thing but those which are wafted from Araby the blest! A horrible, sickening, nauseous odor, that was almost suffocating, and which drove every one, with exclamations of disgust, back into the saloon. Coleridge’s two-and-seventy well-defined stench of the town of Cologne must have been attar of roses, compared to it. It was a baneful compound, made up of the emanations from gas-manufactories, bone and fat-boiling establishments, slaughter-houses, and other sources from which the filth

and effluvia of a great city arises. It seemed incredible that three-quarters of a million of people lived at the bottom of such a fetid sea of air, and that a large proportion of them passed their entire lives, year in and year out, in the very midst of the narrow, filthy streets, reeking gutters, and dark, foul alleys, with which the lower part of New York abounds. Yet such is the case, and there are thousands of this class who do not know what a priceless luxury it is to breathe pure air, and who seldom or never go beyond the immediate neighborhood in which they dwell. Is it to be wondered at that the mortality among these hapless creatures, and particularly among their children, is so large? When we consider the character of their lives in all its aspects, the over-crowded condition of their dwellings, the nature of their food, the dark, foul closets in which they sleep, into which no ray of sunlight, no breath of fresh, pure air ever enters, steeped continually in noxious vapors, and surrounded by the very worst of hygienic influences generally, it is a matter of surprise that any attain to adult life.

It will seem incredible to many readers of THE HERALD OF HEALTH that there are single blocks of tenement houses in New York that contain a larger population than many villages in New England, or in the far West. We have often entered these abodes of poverty and squalor. If one is not sufficiently disgusted with the damp, slimy walls, the dark and narrow passages and rickety staircases, to turn back to the sunlight and less offensive air outside, his heart can not but be touched at sight of the misery which prevails within. We have no hesitation in saying that many of the complaints from which these wan and wretched little creatures suffer are engendered solely by the vile atmosphere by which they are surrounded. Life is poisoned at its very source, and it is not in the nature of organized beings to exist unharmed in such violation of natural laws. When we remember that most adult persons respire fourteen cubic feet of air per hour, we can easily imagine the atmospheric condition of such houses—each small room of which contains an

average family, say four persons—especially at night, when doors and windows are tightly closed. Is it strange that the annual mortality in these pestilential abodes reaches as high as sixty-five or seventy per cent.?

Prominent among the social questions of the day is that pertaining to the amelioration of the poor of large cities. The subject is one of the greatest interest, and deserving the deepest thought. Their condition is truly a pitiable one, and all efforts to improve their social and moral natures must begin by improving their physical condition. Their dwellings must be first made clean and wholesome, and thrown wide open to the influence of the blessed sunlight and the pure air of heaven. The great charitable institutions of the city, the hospitals, dispensaries, missions, etc., are accomplishing much good, but they do not seem to reach the root of the disease. With improved dwellings, and better sanitary influences of every nature, we may look for a better condition of things among this great and rapidly increasing class, and then only.

SHALL WE SEND OUR CHILDREN AWAY FROM HOME TO BE EDUCATED.—The notion is quite prevalent that it is a good thing for children to go away from home while acquiring their education, so that they may see the world and learn how other folks live. There is doubtless much to be learned in seeing the world, and we would, by no means, deprecate the enlargement of mind which comes by travel; but the natural place for children is home, and their best society that of their parents and brothers and sisters. The teacher of a boarding-school has the double office of teacher and parent, and however well he may fill the former, it is impossible for him to fill the latter to the perfection which the parent can, and often does, attain. The child almost knows instinctively that the love of a parent is disinterested, that his advice is without any selfish motive, and that his command must be obeyed; he therefore trusts his parent with a confidence, and obeys him with a good will, which he is not ready to

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I am further confirmed in this view by the facts of my former experience. I once drank wine and know that it never did me any good; that it was always either worthless to me or a positive injury. And, I find by late and larger experience, the human system as it came from the mould of Nature has no need of this fiery *ichor*—or Devil's elixir more properly—to support it, and keep it in working order. Of course, there are arguments for Temperance which I can not even name, much less illustrate, in so brief a letter as this; and there is none at all which successfully opposes it in the minds of candid and intelligent men.

Next to Temperance, I should place Cheerful-

ness as the greatest ally of good health. And this brings me to what I have to say of Amusements.

I suppose it will be thought because I am a showman by profession, that I must therefore countenance the Drama in all its unlicensed broadness, and every thing which promises to cater to human diversion and interest. But, frankly, I do not. There are amusements which are edifying, instructive, curious, and mirthful; and there are those which may partake of these qualities in certain degrees, which are corrupting and immoral. I make no war with the theatre *per se*; but I oppose every thing, dramatic or otherwise, which can not be produced before the whole family, and be a fair subject of discussion in the choicest circles. A moral play, or one which amuses and relieves the mind is not objectionable to me though on the theatre boards; but a play, exhibition, or speech of any kind whatsoever which will bring a blush to the face of purity, is to be sternly condemned. Late hours, and unventilated rooms, are also to be avoided as fruitful accessories of harm. In my opinion they go far deeper than to merely undermine the health, for they help powerfully to disturb the moral order of those who are subject to them.

The sad, careworn look of Americans is proverbial. Our very air is charged with electricity, and we are all in a furious hurry. Our holidays are few, and are generally taken with a sad longing over the ledger—not Mr. Bonner's—which is left behind. We ought to have more holidays, and make joy frequently a religious duty. Innocent games, playful or other, carried on with moderation, merely for mirth and hilarity, are wholesome of themselves. They add, I am certain, not only to human happiness, but to length of life; and make even the hours of labor of far more value. The ecclesiastical teaching of former times was most unwisely, as I believe, put in a hostile attitude to amusements; and we yet inherit in some degree, from Puritan traditions, the idea that a long face and Pecksniffian gravity are the fit expression of religion itself. But the sons of

the Puritans have done something toward settling this matter right. Though a blue synod or morbid conference may occasionally discuss the sinfulness of croquet, or other equally mild diversion, I rejoice to know a better feeling is obtaining in respect to amusements, and look forward to the day when it shall be the duty of the Churches to provide them, instead of struggling to put them under ban. Life, at best, has its quota of weariness and toil; its cares choke out the sunshine to which the heart has a natural right, and he who hinders any suitable expression of mirth or joy is a foe to human welfare no less than to human health.

When my Museum burnt down I took Horace Greeley's advice, "to go a-fishing"—that is, metaphorically; and though I manage through trained subordinates to carry on considerable work, a large part of my time is spent in the delights of my country retreat at "Waldemere," my new summer residence at Bridgeport, or in social ways among my neighbors and friends. I can not be absolutely still, for want of occupation is spiritual death, and, to me, torture; but I who once "lived laborious days," now command many hours for myself alone, and take my *otium cum dignitate*; or, as the boy translated it, "eat my oats with dignity."

I rise promptly at 6½ o'clock, and earlier when necessary, and usually retire before 11. I eat freely of such wholesome food as the market affords—too many kinds, possibly, but not more than I crave; and observe regularity and system in all that I do. The "clam-bakes," which are an established and delightful form of picnic here, are one of my especial indulgences, and with the alternate exercise and breezy salt air, would form no very unsuitable adjunct to a health institution. At my regular table I make it a prime point to have no conversation but that which is cheerful and pleasant. Every joint is carved with a joke, while puns put forth with perfect impunity give piquancy to the palate.

Cleanliness and frequent bathing I regard as cardinal virtues, and I have every appliance for

securing these in my city residence in New York, and in my summer one already alluded to. Tobacco I detest—not equally with alcohol—and, practically, I abstain from it *in toto*. It is not only unclean, but hurtful and expensive, and not fit for the use of a civilized race. Fashion, not Nature, prescribes the habits of smoking and chewing, and they are attained only through nausea and illness. The first appearance at their shrine is generally the signal for “offering up” a prompt sacrifice.

My favorite exercise is riding; and I usually take several brief rides each day, at regular intervals—having some purpose, of course, in view, and in the country drive my own horse, or horses—keeping, usually, about six in my stable. The vicinity of Bridgeport is famous for its fine drives; you can go a dozen directions with interest; the breezes from the Sound are fresh and stimulating; and this pleasure does not cloy by repetition. I once accustomed myself to walk before breakfast around our Seaside Park—distance a mile and a half—and derived some benefit. But walking is better fitted for some constitutions than for others, and in this practice each individual must study his own peculiar nature and strength.

You may be interested to know, possibly, that I tried on one occasion—when I thought I was too corpulent—Mr. Banting's system of growing lean. I got off twenty pounds very soon by following his rules; but, feeling no particular benefit from the reduction, I returned soon to my old diet and weight.

If I have any thing more to add to my theory of living, it would perhaps be a brief summary of my whole creed.

And these are its articles:

Abstain wholly from liquor and tobacco. Be temperate in all things. Remember that cleanliness is next to godliness. Be cheerful and unselfish. Do not let care corrode your heart. Do your duty as your conscience prompts, and leave results to Him who alone can control them to the furtherance of His designs. By so doing you will have—so far as human means

can contribute to it—health, long life, and substantial happiness.

P. T. BARNUM.

WALDEMEER, BRIDGEPORT, CONN., Sept. 25, 1871.

IMPURE AIR AS A CAUSE OF DISEASE.—

Among the manifold causes of the various forms of disease which afflict mankind, there can hardly be mentioned one more potent or constant than a vitiated, noxious atmosphere. Especially is this true of large cities, where the exhalations from a thousand different sources combine to fill the air with poisonous gases, which, being constantly inhaled, plant the germs of disease in the lungs, impoverish the blood, and, in many instances, undoubtedly hasten the fatal termination of otherwise remediable diseases. It is impossible for even the most vigorous constitution to long withstand such a blighting influence. Its effects may be seen any day in the pale, cachectic countenances of the habitual dwellers in crowded cities, when contrasted with the ruddy, healthful cheeks of those who live among the breezy hills and wide open fields of the country. This difference of atmosphere was made strikingly apparent not long since, while approaching New York on the day-steamer from Albany. The passengers were mostly assembled in the forward part of the boat, enjoying the magnificent scenery of the noble Hudson, and drinking in the delicious, health-giving air from the grand old mountain slopes; and while the great city was yet miles away, and its whereabouts only manifested by the thick cloud that hung above it, there suddenly came an odor upon the wind that was like any thing but those which are wafted from Araby the blest! A horrible, sickening, nauseous odor, that was almost suffocating, and which drove every one, with exclamations of disgust, back into the saloon. Coleridge's two-and-seventy well-defined stenches of the town of Cologne must have been attar of roses, compared to it. It was a baneful compound, made up of the emanations from gas-manufactories, bone and fat-boiling establishments, slaughter-houses, and other sources from which the filth

and effluvia of a great city arises. It seemed incredible that three-quarters of a million of people lived at the bottom of such a fetid sea of air, and that a large proportion of them passed their entire lives, year in and year out, in the very midst of the narrow, filthy streets, reeking gutters, and dark, foul alleys, with which the lower part of New York abounds. Yet such is the case, and there are thousands of this class who do not know what a priceless luxury it is to breathe pure air, and who seldom or never go beyond the immediate neighborhood in which they dwell. Is it to be wondered at that the mortality among these hapless creatures, and particularly among their children, is so large? When we consider the character of their lives in all its aspects, the over-crowded condition of their dwellings, the nature of their food, the dark, foul closets in which they sleep, into which no ray of sunlight, no breath of fresh, pure air ever enters, steeped continually in noxious vapors, and surrounded by the very worst of hygienic influences generally, it is a matter of surprise that any attain to adult life.

It will seem incredible to many readers of THE HERALD OF HEALTH that there are single blocks of tenement houses in New York that contain a larger population than many villages in New England, or in the far West. We have often entered these abodes of poverty and squalor. If one is not sufficiently disgusted with the damp, slimy walls, the dark and narrow passages and rickety staircases, to turn back to the sunlight and less offensive air outside, his heart can not but be touched at sight of the misery which prevails within. We have no hesitation in saying that many of the complaints from which these wan and wretched little creatures suffer are engendered solely by the vile atmosphere by which they are surrounded. Life is poisoned at its very source, and it is not in the nature of organized beings to exist unharmed in such violation of natural laws. When we remember that most adult persons respire fourteen cubic feet of air per hour, we can easily imagine the atmospheric condition of such houses—each small room of which contains an

average family, say four persons—especially at night, when doors and windows are tightly closed. Is it strange that the annual mortality in these pestilential abodes reaches as high as sixty-five or seventy per cent.?

Prominent among the social questions of the day is that pertaining to the amelioration of the poor of large cities. The subject is one of the greatest interest, and deserving the deepest thought. Their condition is truly a pitiable one, and all efforts to improve their social and moral natures must begin by improving their physical condition. Their dwellings must be first made clean and wholesome, and thrown wide open to the influence of the blessed sunlight and the pure air of heaven. The great charitable institutions of the city, the hospitals, dispensaries, missions, etc., are accomplishing much good, but they do not seem to reach the root of the disease. With improved dwellings, and better sanitary influences of every nature, we may look for a better condition of things among this great and rapidly increasing class, and then only.

SHALL WE SEND OUR CHILDREN AWAY FROM HOME TO BE EDUCATED.—The notion is quite prevalent that it is a good thing for children to go away from home while acquiring their education, so that they may see the world and learn how other folks live. There is doubtless much to be learned in seeing the world, and we would, by no means, deprecate the enlargement of mind which comes by travel; but the natural place for children is home, and their best society that of their parents and brothers and sisters. The teacher of a boarding-school has the double office of teacher and parent, and however well he may fill the former, it is impossible for him to fill the latter to the perfection which the parent can, and often does, attain. The child almost knows instinctively that the love of a parent is disinterested, that his advice is without any selfish motive, and that his command must be obeyed; he therefore trusts his parent with a confidence, and obeys him with a good will, which he is not ready to

yield to a stranger. It is the duty, therefore, of parents to keep their sons and daughters together at home till their minds are well disciplined by study, their principles well established, and their habits formed, and then they can safely see the world, and profit by the lessons it teaches. The high school enables us thus to do. The young men and women graduating from our high schools find the same incentive to action in society that they found in the school, and do not leave behind them the forces which thus far have impelled them. There is no such violent change as must occur when one graduates from a school exclusively devoted to one sex.—*College Courier*.

SYSTEM IN BRAIN-WORK.—A correspondent of London Society says: "I know a remarkably able and fertile reviewer who tells me that, though over his midnight oil he can lucubrate articles with a certain sharpness and force, yet for quietly looking at a subject all round and doing justice to all its belongings, he wanted the quiet morning hours. Lancelot Andrews says he is no true scholar who goes out of his house before 12 o'clock. Similarly an editor once told me that though his town contributors sent him the brightest papers, he always detected a peculiar mellowness and finish about the men who wrote in the country. I knew an important crown official whose hours were from 10 to 3. He had to sign his name to papers, and as a great deal depended upon his signature he was very cautious and chary how he gave it. After 3 o'clock struck, no beseeching powers of suitors or solicitors could induce him to do a stroke of work. He would not contaminate the quality of his work by doing too much of it. He would not impair his rest by continuing his work. And so he fulfilled the duties of his office for exactly fifty years, before he retired on full pay from the service of the country. And when impatient people blame lawyers for being slow, and offices for closing punctually, and shops for shutting early, and, generally speaking, the wider adaptation of our day to periods of holidays and

rest, they should recollect that these things are the lessons of experience and the philosophy of society and life."

CHOLERA.—Now that we are threatened with cholera, people will be delighted to learn that a man in Florida, who probably never saw a case in his life, and who more than likely wouldn't know one if he should see it, has discovered a remedy, and announces that as yellow fever and cholera are caused and fed by animalculæ floating in the air, a system of concussion can clean every infected atmosphere and crush out the epidemic. In proof, the inventor, Mr. W. J. Hardee, proposes to begin in Charleston, S. C., where the yellow fever is now raging, and attest the truth of his discovery at the risk of his own life. He gives himself ten days to clear out the disease, and means to work substantially as follows: "Take one ton of gunpowder for the entire city of Charleston, and work twelve consecutive nights, using five pounds of powder at each explosion, beginning at 9 p. m. At the end of ten days there would not be a case left in the city."

DEXTER'S STABLE.—Robert Bonner's horses live in better houses than the early English kings, or than the present race of average American citizens. Dexter lives in a marble stable only a few doors off Fifth Avenue, the ventilation of which is perfect. Dexter is a vegetarian, and never uses tea, coffee, nor whisky. He is what some folks would call a teetotaler.

AS THE BABYLONIANS had no physicians with whom to consult in case of sickness, they adopted a novel plan to obtain relief under such circumstances. They had the infirm brought into the Forum, and those who passed by were asked their opinion as to the nature of the disease. They demanded of each one if he ever had the same distemper, if he knew any one who had it, and, if so, how he was cured?—*Family Herald*.

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Wine and Exercise.—"In conversing with an educated English physician, who is in the habit of taking wine and other stimulants, I said that he was destroying his vital power by over-stimulation, and used the argument that is advanced by the Hygienists—that we are given so much vital power, that if used in advance by stimulants it can not be replaced. He replied, that when one gained strength by muscular exercise it was by the stimulus the muscles afforded; that it was a food to the system the same as wine was; when one is tired and incapable of exertion, a little wine helps them to the exertion, just as muscular exercise increased the strength by feeding the body. The answer to this may be that one is a natural stimulus, while the other is unnatural. I would like your reply to this, that I may be better armed, as I am constantly combating the use of spirituous liquors?"

Exercise is a natural stimulus, the same as food and air, and is indispensable to health, while wine is a poison, or rather contains an active poison—alcohol—which causes the stimulation. The effects of the natural stimulation of exercise are to increase muscular strength, and to render more perfect the different functions of the body. These effects are not merely temporary, they are permanent, while alcoholic stimulation is the effort of the system to expel the poison—alcohol—and is always temporary and is always succeeded by a corresponding degree of exhaustion.

Strengthening the Lungs.—"Will you please give your opinion, through THE HERALD OF HEALTH, of the following method of strengthening (?) the lungs? The process consists of taking a small pair of hand-bellows, inserting the nozzle between the lips, and inhaling the air as it is forced into the mouth by working the bellows. The person who showed me the operation claimed to have been much benefited by it. If you can an-

swer through the magazine, you will confer a favor upon me and perhaps others of your readers."

The principle is wrong. It may produce good results in some cases, but it is very liable to injure the lungs. The chest should be expanded by muscular effort, and the air given a chance to rush in of its own accord, as it certainly will if given a chance. If the air is forced in, it is very liable to over-distend and weaken the delicate air-cells, thus weakening instead of strengthening the lungs. All methods of developing the lungs, either by the use of spirometers, which force the air into the lungs, or by any other mode of forcing the air into the lungs, are false in theory and usually injurious in practice. By slowly and freely inhaling the air the muscles of respiration are brought into strong action and thereby strengthened, and the lungs become gradually expanded and strengthened in a natural way, and without straining them. Spirometers, when the air is thus inhaled and expired into them, for the purpose of measuring the quantity expired, are constructed upon the right principle and are useful, while all others do more harm than good.

Chewing Gum.—"I would, like to know what effect the use of chewing gum has upon the teeth and stomach. Also, what it is composed of."

This query is completely answered by Dr. T. F. Hicks in a late number of The Medical Independent, as follows:

"A gentleman in the streets of C——, Iowa, lately counted, in fifteen minutes, seventy ladies chewing gum. This habit prevails extensively, especially in the West. Almost every school-girl you meet is chewing, chewing, chewing."

Of course it will not be pretended that this habit is either as injurious or as nasty as that of chewing tobacco, yet it is not altogether innocent.

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I would gladly see this work in the hands of every young mother in the land; it would serve to give her confidence in herself and in the divine provisions of Nature. She would be saved from that weak and senseless fear which embitters the life of the young wife and mother, and leads her to adopt courses destructive to her peace of mind and detrimental to her health.

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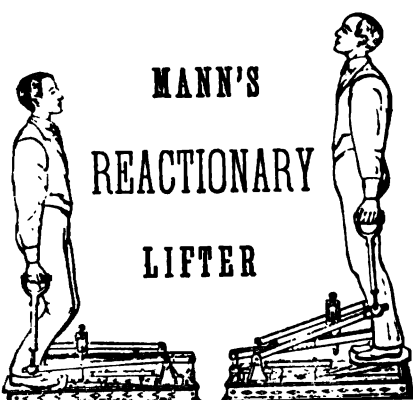
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CONTENTS FOR DECEMBER, 1871.

GENERAL ARTICLES :	Page
How Best to Promote the Cause of Temperance— <i>O. B. Frothingham</i>	241
Old Age— <i>Charles H. Brigham</i>	246
A Health Trip to the Orient— <i>Dr. Lydia F. Fowler</i>	251
Lessons from the Chicago Disaster— <i>Thomas K. Beecher</i>	257
Abnormal Longevity of Man— <i>E. Ray Lankester</i>	262
Down in the Heart (A Poem)— <i>Lydia M. Millard</i>	264
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Birdsall</i>	265
Studies in Hygiene.....	268
Ten Questions in Hygiene.....	268
The Germ Theory.....	268
Baking Powders.....	269
Cutting off the Beard.....	269
Tobacco Statistics.....	270
Power, to Resist Disease.....	271

EDITORIAL DEPARTMENT :	
A Glance Backward and Forward	273
An Open Question.....	275
Getting Rested Every Day—Methods of Getting Sleep—Ten Laws of Life....	276
Oxygen Treatment—Is the Climate of Minnesota as Beneficial as Formerly?	277

ANSWERS TO CORRESPONDENTS :	
Exercise—How Much, When, and How Given.....	278
Dyspepsia and the Vibratory Exerciser—The Best Spring Bed—Want of Breath.....	279

OUR DESERT TABLE :	
A Restaurant Keeper.....	272
A Fireman in Pennsylvania.....	272
An Eccentric Minister.....	272
A Wife's Text.....	272

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VOL. 18, No. 6.] NEW YORK, DECEMBER, 1871. [NEW SERIES.

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A NEW DISCUSSION OF TEMPERANCE PROBLEMS;

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No. XIV.—HOW BEST TO PROMOTE THE CAUSE OF TEMPERANCE.

BY O. B. FROTHINGHAM.

AFTER all that has been said on this question, and after all that had been done in the way of practical answer to it, any remarks that we are likely to offer may be open to the charge of impertinence. But, notwithstanding all that had been said and done, the question is still an open one. It is much debated, and by none so much as by the old confessors and workers who have spent the most thought and devoted the most effort to the cause.

The past generation saw many plans adopted and pursued, each of which was in turn supposed to be admirably calculated to compass the end in view, and one by one they failed to meet the expectations of their friends, and now in Massachusetts it is proposed to give them all up, and to return to the old method of moral influence, which was abandoned in favor of more arbitrary and, it was thought, more effective measures.

The best way of promoting the cause of Temperance in society, is therefore, yet to be found. It would be presumption for us to claim that we have found it. We advance no such pretension. The most we shall attempt in this short paper

will be to offer some plain thoughts that tend in the direction we think should be followed.

And, first of all, it appears obvious that the chief object to be attained should be distinctly seen and firmly held in view. Every great cause is helped by limiting as much as possible the number of points that require attention. A few broad considerations are better than many small ones. A single broad consideration is better than two or three. If it is proposed to accomplish several things, the probability is that no one will be achieved. If a single thing be proposed, there is a probability of carrying it.

Now, what is the main object to be gained by the Temperance Agitation? Is it the total eradication of the habit of stimulating the system by the help of alcoholic drink in every form and every degree? That is an all but hopeless, if not an utterly hopeless task to attempt by special endeavors. Is it the total suppression of the manufacture and sale of ardent spirits? That is impracticable by deliberate effort. Is it the absolute closing of wine-shops, the abandon-

ment of criminal practices by the comfortable and wealthy classes? The difficulties in the way of that are enormous. The effort to effect it would alienate many who might be useful in some departments of the Temperance Movement, and the result, if accomplished, would not of necessity redound to the success of the warfare on the fields where the battle rages hottest. The desire for stimulants must be slowly outgrown by the moral development of mankind, and the process of outgrowing it is slowest where that moral development is least favored by industrial and social conditions.

The warfare is against Intemperance—that is, against intemperate indulgence; not primarily against all use, or all indulgence, but against *immoderate* indulgence. If it be said that all indulgence is immoderate, that may be granted. Total abstinence we will admit to be the best, the wisest, and safest rule for every body, the only rule for the greater number. But all indulgence is not *visibly* and *palpably* immoderate; all indulgence is not manifestly injurious to social order and public peace, domestic happiness, personal character, or private health. A great deal of the indulgence is offensive to nobody, impoverishes nobody, wrongs nobody, and grieves nobody. Men who have well-stocked cellars, and who take therefrom many bottles, live to a great age, are clear-headed and capable, dwell in happy homes, are kind husbands, admirable fathers, warm friends, honest merchants, public spirited citizens, sincere Christians, benevolent and trusty men. All who use spirit are not wasteful; all are not idle; all are not noisy or abusive; and these do not fairly come within the category of the intemperate. These do not call down on themselves the condemnation of practical reformers. They are neither victims to be saved, nor makers of victims to be pursued.

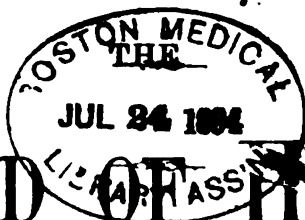
The intemperance that gets the better of the nobler part of men, the intemperance that makes men brutes, demoralizes them, impoverishes them, destroys their sense of right, perverts their affections, makes them idle, violent, abusive, renders them harsh to their wives, neglectful of their children, disturbers of the peace, enemies of order: this is the intemperance that is a mark for the assaults of good men. This concerns every body, touches every vital interest, is a public foe. This is a source of poverty and crime; robs us, endangers property and life, is an enormous burden on the material and mental resources of the country. The evil of this is tangible, ever-present, and appreciable. Would not something be gained by severely keeping

this one mischief in mind and letting other accidental questions drop into the background?

The assault on the milder forms of intemperance, if intemperance it should be called, is justified on the plea that excessive indulgence takes encouragement from moderate indulgence, encourages itself by it, and is inflamed by its example. The moderate drinkers, we are told, make immoderate drinkers. There would be none of the latter, if there were none of the former.

On this point we confess ourselves to be quite incredulous. That the moderate drinker may himself become an immoderate drinker is no doubt true, and it is a reason for exercise and caution on the part of those who partake at all of the intoxicating cup. It is a reason why many, the great many, should wholly abstain. But that the use of wine by gentlemen in the houses, for instance, encourages the laborer to tittle in the dram-shop, is a point we have always been incredulous upon. Why should the laborer know nothing about the gentleman's habits, and, if he did, would draw no lesson either for evil or for good from people who live in so entirely different a world. His passions, cravings, appetites, are his own. He has his own fatigues and exhaustions, his own commerce and associations, his own thoughts and feelings on all subjects. His intemperance is the fruit of his private temptations, not of his employer's indulgence.

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HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE,

ADVOCATES

A Higher Type of Manhood—Physical, Intellectual, and Moral.

CONTENTS FOR DECEMBER, 1871.

GENERAL ARTICLES :		Page	EDITORIAL DEPARTMENT :	
How Best to Promote the Cause of Temperance— <i>O. B. Frothingham</i>	241		A Glance Backward and Forward	273
Old Age— <i>Charles H. Brigham</i>	246		An Open Question.....	275
A Health Trip to the Orient— <i>Dr. Lydia F. Fowler</i>	251		Getting Rested Every Day—Methods of Getting Sleep—Ten Laws of Life....	276
Lessons from the Chicago Disaster— <i>Thomas K. Beecher</i>	257		Oxygen Treatment—Is the Climate of Minnesota as Beneficial as Formerly?	277
Abnormal Longevity of Man— <i>E. Ray Lankester</i>	262		ANSWERS TO CORRESPONDENTS :	
Down in the Heart (A Poem)— <i>Lydia M. Millard</i>	264		Exercise—How Much, When, and How Given.....	278
Theories Put in Practice, or Diary of a Physician's Wife— <i>Mrs. H. C. Birdsall</i>	265		Dyspepsia and the Vibratory Exerciser—The Best Spring Bed—Want of Breath.....	279
Studies in Hygiene.....	268		OUR DESERT TABLE :	
Ten Questions in Hygiene.....	268		A Restaurant Keeper.....	272
The Germ Theory.....	268		A Fireman in Pennsylvania.....	272
Baking Powders.....	269		An Eccentric Minister.....	272
Cutting off the Beard.....	269		A Wife's Text.....	272
Tobacco Statistics.....	270			
Power to Resist Disease.....	271			

NEW YORK:

WOOD & HOLBROOK, PUBLISHERS, 13 & 15 LAIGHT ST.

GENERAL AGENTS—AMERICAN NEWS CO. . . NEW YORK NEWS CO.

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Single Copy, 20 Cents.

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ample of perfectly restrained gratification in any desire should be credited with that achievement, not held answerable for the vice in another which he deploras, and in himself ably resists.

The Temperance advocates, we are persuaded, have made too much of this presumed influence of the higher classes on the lower. The industrial people of all ranks see the wealthier classes openly enjoying a thousand things they themselves can not afford and do not think of coveting, fine houses, costly clothes, jewels, horses, carriages. They know of the great banquets, the sumptuous dinners, the elegant suppers, the well-stocked larders and wine-cellar. But it does not occur to them to copy such expensive habits at the risk of ruining their families. The different orders of society live under their own laws. No doubt the general moral contagion more or less affects all, but only in a general way. The upper classes might be dissolute, and yet the lower classes be well-behaved. The upper classes might be well-behaved, and yet the lower classes be dissolute. They are subject to the pressure of very different forces. Fashion, respectability, social position and repute sway the one; necessity, want, comfort, the industrial prospects of the day, the tides of religious feeling sway the other. He who would reform intemperance at the top of society will, if he is wise, adopt a method quite different from that required to reform intemperance at the bottom.

Now, it is the intemperance at the bottom of society that is the chief source of our misery. It is here that on a large scale it causes poverty, crime, distress, suffering, sorrow, and wickedness manifold. It is here that the crippling of power, the waste of resources, the ruin of existence are felt. It is here that the huge mass of evil lies a dead weight of misery on the whole community. How best to deal with the problem on this plane is the immediate question.

There are direct and indirect measures to be pursued. The former aim at bringing influences to bear on the intemperance itself; the latter aim at diverting the minds of its victims into other channels, and thus depriving the temptation of its power. Both are important, and both should be pursued; each by those who are best qualified to give the device efficacy.

Intemperance is due to the predominance of the animal nature over the moral. Its primary cause is moral infirmity, inability to resist temptation, or to entertain considerations of personal dignity, safety, or happiness in the hour when passion is solicited. The best mode therefore, of promoting the cause of Temperance is to stimulate the moral nature. The moral growth

of society is exceedingly slow. Generations must elapse before the moral development of the multitude will be such as to condemn the vice of intemperance, to rise above it and put it away. This is hardly achieved yet by any considerable number, even among the intelligent, instructed, and responsible. How can such height of attainment be looked for among the unintelligent, the uninstructed, the comparatively irresponsible? It can not be, and therefore special means must be taken to stimulate moral feeling in advance of its tardy development. This is the task of the reformer and the philanthropist.

The uneducated people are most easily reached through their religious feelings. Here lay the secret of Father Mathew's prodigious success in Ireland, and in America. He was a Roman Catholic priest, the Superior of the Order of Capuchin Friars, a man of entire singleness of purpose, and great devotion of will. His power over the superstitious Catholics was immense. When the disciple knelt before the holy man, took the solemn oath of total abstinence, received the sign of the cross, and the accompanying blessing, and then had the medal and the card put into his hand, he was convinced that Father Mathew imparted a saving virtue to the bit of paper and the stamped metal, that he knew their hearts, that their oath bound them to him by a supernatural and mystical tie, and that a fearful punishment would descend on all who broke the pledge. The reformer knew this, and availed himself of the belief, not directly encouraging it, rather deploring it, but doubting his power to effect much without it, and hoping that the good results of his work would last when the superstition had passed away. The effects did not last, for there were few Mathews among Romish priests; but they were surprising in extent and character. Distilleries were shut up by scores; grog-shops were changed into coffee-kitchens; roofs were repaired; tables were decent and well supplied; the clothes-chests filled up; and the piles of money increased. Deposits multiplied in the savings banks; in two years the number of those enrolled in the Temperance Army numbered two millions and a half, not one of whom was summoned before judge or jury. The Ireland which had paid six millions a year for proof spirits, reduced her expenditure nearly one-half in those two years.

The effects could not last, for they were due to a sudden and peculiar excitement, associated with an individual reformer, and they were crossed too by certain political movements

which can not be mentioned here. But apart from the superstitious accessories, the movement had an element of soundness that was employed with good results when Father Mathew was he more, and is susceptible of being turned to excellent service still.

The Protestants used it with powerful effect, bringing into play the forces of menace and persuasion latent in the "Evangelical" theology. Even the less severe sects putting enthusiasm and purpose into their moral ideas, succeeded in making an impression on the better affections of the tempted class, and snatching multitudes from danger. The work of reformation was greatly helped by the spirit of organization that was called in. The societies, the meetings, the public occasions, the festivals and the processions, the oaths and pledges, the medals and badges, all assisted the enterprise; and though the means were not always dignified, the result in fostering self-respect and warming affection was better than had been otherwise achieved. Mr. Gough, to whom many thousands owe their rescue from the bondage of intemperance, confines himself to moral agencies, reasoning, appeal, persuasion, and the quickening of the personal powers of character by which the demoralized are brought to their senses, and restored to their right mind.

This method is the most difficult, it calls for more individual consideration, more earnestness, more humanity, more faith in God and man than any other. For this reason probably, it has been abandoned for legislative and political devices which promise larger results to less toil. It is open, too, to the objection of being more or less spasmodical and intermittent in its character. A steady pressure of moral power is difficult to maintain. It ebbs and flows. There are seasons of excitement succeeded by seasons of depression. Hope alternates with discouragement. The reformers become weary of their task because their labor seems to be thrown away.

Still this is the only permanent influence there is, and it is the soul of all other. Moral power lies behind every demonstration of power. It is useless to legislate without it, for without it laws can neither be enforced nor made. The policy of prohibition demands it both from those who would make the prohibition effective, and from those against whom it must operate. It is very easy to talk about shutting the door of the dram-shop, so that the tempter and the tempted can not meet. But unless he that attempts to shut the door of the dram-shop has a great force of conscience to back him, he will

not prevent the tempter from opening a door in the rear, or a window in the lane; and unless the endangered victim has a force of conscience inside of him, at that back-door or window he will find his way in to his ruin. Machinery will not work without steam or water-power, and in matters of vital moment to society the steam or the water-power is the moral sense, which is created in the uninstructed classes mainly by religion, appealing to the fear and love of the spiritual and eternal world, to the soul's consciousness of dignity, and the soul's apprehension of doom. The Catholic priest and the Protestant minister have a duty to discharge in this connection which they have never faced or apparently considered.

But this is not the sole, nor the sole effective mode of working against intemperance. Equally valid, and more strictly scientific, is the method of diversion, by which desire is turned from one fascination to another, from a dangerous fascination to an innocent one. Passion must be met with passion; fire must be fought with fire. To reason with an inebriate, or one who is in peril of becoming inebriate, is utterly useless. To show him the condition he is in does no good. To remonstrate with him is unavailing. To thwart him rouses his wrath. To interfere with his liberty excites his worst passions, and adds to them cunning. The inebriate hospital provides variety of entertainments, in-doors and out, to keep interest alive and stimulate emotion. Some ladies of Boston have established the "Holly Tree Coffee-Room," a cheerful, neat place for refreshments, in the neighborhood of the dirtiest grog-shops. The walls are decorated with engravings, newspapers are lying about pungent mottoes meet the eye, pithily contrasting the place with the dens in the vicinity. The superintendent is heartily interested in the undertaking; the attendants are ready and obliging; the provisions, meat, bread, coffee, and tea are very low, but very good. The plan succeeds. Many leave the old haunts for the new resort, and a palpable effect has already been produced on the habits of the neighborhood. A small beginning, but the beginning of a genuine enterprise. Stimulus is matched with stimulus, and the more harmless stimulus is aided by the advantages of cleanliness, decent taste, and comfort.

But there are other and more efficient ways yet of checkmating the enemy. The true friends of Temperance who mean work will provide places of entertainment for the working people down amid their own haunts, in the very sections of the city where their danger lurks.

They will furnish cheap concerts, pleasing dramatic entertainments, done by respectable amateurs who will bring personal influence with them; popular readings from the poets, novelists, histories, penny readings, such as have been instituted with such admirable effect in England; acted charades and tableaux; entertaining lectures on scientific subjects, illustrated with drawings and experiments; gymnasiums and play-grounds for exercise in the open air—any thing that will attract the tired, jaded people, and give them something outside their stupid, comfortless homes besides the gin-shop; something to make them laugh or cry, and at any rate lose the consciousness of immediate misery in the instruction or the amusement of the hour.

By such simple arrangements as these, wonders may be accomplished. They need not be costly; they need not be burdensome; they need not tax severely either the time or the talents of those who employ them. One thing they do require as a condition of their success, and that is minds free from sectarian prejudices and bigotry of opinion, minds capable of taking reasonable views of questions, and adopting the methods best suited to accomplish the chief end, without regard to the opinions of narrow partisans or vague sentimentalists.

To go to work rationally is the prime requisite in this, as in other things; to adjust means to ends. Of this there has been quite too little thus far. The means have been such as commended themselves to the politician who believed in the machinery of government, or the religionist who believed in the machinery of the Church; if they seemed theoretically just, they were worked until they failed, and then their failure has been regarded as demonstrating the hopelessness of the cause. A little common sense in place of the sentimentalism and the speculation would by and by make it evident that the evil is by no means incurable, but, if it can not be overcome by force, may be reduced in its proportions to the dimensions of a manageable mischief.

It must never be forgotten, however, that these great moral undertakings require much time. The work of a generation is not to be done in a twelve-month. To suppose that a vice like intemperance, the remnant of ancient brutality and the legacy of past ages of animal indulgence, the inheritance of the rudest times, can be voted out of existence by a legislature, or knocked out of existence by a policeman's club, is to be guilty of a foolishness unworthy of rational men. No such tampering with an evil will answer. The demon must be seen, measured

and faced; and we know no way of doing that but the good old way of moral endeavor, aided, as it can be aided now, by the resources of science and art. The magnitude of the mischief calls for a remedy equal in magnitude. The character of the mischief calls for a remedy as serious and thorough. Probably none of the measures employed by the Temperance Reformers have been ineffectual. All have told, each has indirectly, if not directly, helped to reduce the evil. Unwise methods have suggested wiser ones by their failure. It is a great advantage to have discovered what will *not* answer the purpose, for the methods that will answer are by that discovery suggested. Patience, perseverance, earnestness, fidelity, sincere philanthropy never fail to answer. They always pass for their full value however embodied and expressed, and nothing else passes for any value at all. The most admirable science must have this soul of enthusiasm, or it will be an engine without power.

Who can read the history of society during the last fifty years and not perceive that the cause of Temperance has gained ground immensely? The very sensitiveness about it, the attention paid to it, the discussions upon it, the lamentations over it, the indignant protests, the moral feelings against it, the piling up of figures to show how huge it is—yes, the despondency and despair it caused in good hearts, attest a prodigious growth of moral sentiment, and a tremendous uprising of moral purpose. A great evil, unfelt, looks small: a small evil, realized, looks great. Intemperance is by no means a small evil; it is a very huge one. But it seems huger than it did once, because the *evilness* of it is appreciated. The enlightened conscience magnifies what the unawakened conscience failed to see. As the moral dimensions of the mischief increase in the mind's view, the actual dimensions of it, we may be sure, are diminishing. The agony of the reformer marks the progress of the reform.

TRICHINÆ IN THE DOMESTIC FOWL.—Dr. G. S. Bryant reports having found embedded in the stomach and intestines of the hen large numbers of entozoa, coiled in cysts in every possible attitude, and not unlike the trichinæ found in the human muscle. He suggests that the disease known as "chicken cholera" is dependent on the presence of these entozoa, and promises to continue and report investigations on this subject.—*Richmond and Louisville Medical Journal*.

Old Age.

BY REV. CHARLES H. BRIGHAM.

ART and poetry and romance and eloquence conspire to glorify old age, and rescue this state of human life from its bad social fame. A favorite theme of college orations is the "Old Age of the Scholar," and the young graduate, with fresh dawn upon his maiden cheek, expatiates upon the beauty of the setting sun of the student's day. In the pictures of the Church, the aureole is oftener around the wrinkled brow and the hoary head, and a worn-out frame is ministered to by the angels. Old age is sung as the time of rest, of calmness, of peace, of fruition without vexation or pain, of blessed memories, of honorable joy in the praises of friends, and in the reverence of children and children's children. It has a right to the title of "venerable." It has the easy chair in the home, and the best seats in the assemblies. It can claim deference, even when it has no special gift of wisdom. An old man should be secure from insult by virtue of his age; his age seems to give him authority. Indeed, the *priest*, the vicegerent of God in the Church, the mediator between the Human and the Divine, is by etymology only the old man, the Presbyter, the Elder. The spirit of the Christian religion, and the spirit of the earlier Jewish religion, inculcates always respect for age. The old are to be honored, cared for, protected, and obeyed. The patriarch is lord of the tribe, and his word is the law in their counsels. Listening to the voice of the Christian hymns and to the demonstration of Christian duty, one could almost long for this blessed season of age, and ask that the wheels of time would fly more swiftly and bring the wished-for day.

In fact, nevertheless, this state of old age is rarely coveted. Even those who celebrate it, dread it in their secret hearts. The preacher who declares its privilege, views with alarm the signs of his own decrepitude, plucks the white hairs from his beard, and tries to suppress the painful thought that he is growing old and is beginning to be an object of compassion. Very few men, in any calling, in any situation, wish to anticipate old age; and it may be safely said that no woman, anywhere, rich or poor, beautiful or plain, wishes to be old, or to seem so. "Old woman," in any language, is a contemptuous epithet; unjustly so, no doubt, but really so.

o woman likes to see the aureole around the

wrinkled brows of one of her own sex; the feminine saints must all be young hours, and must realize Mohammed's answer to the crone who complained, in her despair, that he had shut her out from his Paradise. The real feeling of men and women, in spite of all that is said about the glory of old age, is expressed in the couplet of the Irish Anacreon, truer than the strain of the Psalm or the homily of the preacher,

"Give me back, give me back, the wild freshness of morning,

Its clouds and its tears are worth evening's best light."

There is an instinct which makes us dread the coming of old age, and wish to keep the strength of mature years, if we can not keep the freshness of youth. Very reluctantly the man or woman comes to the confession that old age is really here. The most that they are willing to allow is that it will be here very soon. Mr. Emerson, at sixty-seven, says philosophically that it is "time to be growing old." Dr. Holmes, at sixty, sings of "nearing the snow line;" he will hardly make the expression any stronger ten years hence. The idea of old age which the old have is usually a little farther on than their own tale of years. A youth of twenty classes all who are more than fifty as "old," while a man of sixty, even with his rheumatism, his wrinkles and his gray hairs, is almost unwilling to say that one is old at seventy. At seventy the same man thinks that he shall be old at eighty; while at eighty he seems to himself to be not quite an old man, in remembering that he has a neighbour who is ninety, and who can still be seen in the streets. The actual point of old age is fixed in a sliding scale, which the years push onward for us. It is only when one has outlived all the friends of youth and has memories which no other can share, that the reluctant conviction is forced, of old age as absolute and present reality. The other signs may be explained away, but this is beyond question. Any man who is the last of his race has a *quasi* sense of old age, however young he may be in years. Probably a youth thrown alone upon a desert island would feel there as old as a patriarch, among the beasts and birds. Robin-

the gymnasium, or seek favour among the wrestlers. But he ought to be seen daily upon the street, and walk there as long as the power of motion lasts. There is no more cheering sight than the sight of a hale citizen of eighty, who has horses and carriages at his command, walking daily his mile and back to get his mail, upright and without a staff. Violent exercise of any kind is not fit for the old. They ought not to try their strength in any feats of agility, or do any thing against time. They ought not to tempt the weather as in the day of their youth—ought not to walk in storms, or in burning heats, or in the icy air. But in every pleasant day the blood of age ought to be stirred in its sluggish currents by reasonable exercise, whether in the house or on the highway. Not every old woman with broom in her hand is to be taken for a witch, or every old woman who stirs the caldron to seem as one of the weird sisters.

2. And this leads us to say that old age should not only have regular exercise, but also *some regular occupation*, some duty and service which may occupy body and mind, something more than a few *chores*, the odds and ends of the house. *Juniors ad labores* is a good motto, but the *seniors* are not absolved from labour by reason of their age. Hard work, certainly, is unfit for old age. The veteran corps are not for the hard knocks, or the fore-front of the battle. But it is well for the old to keep part of the work to which they were accustomed, and not relinquish it utterly. An old merchant ought not to retire wholly from business, though he may make no longer any large ventures in the schemes of traffic. An old lawyer will do well to consult with his clients, even when he is not able to plead for them in the Court Room. An old physician ought to heed the patients who have trusted him so long, though he may no longer drive by night, or keep his sign conspicuous on the door. And it is a satisfaction for the aged grandmother that she can knit, if she can do nothing more. Work of some kind should come into the regular habits of old age.

3. And old age also has *appropriate play*. Its gravity need not be perpetual heaviness. It is not to be sequestered to serious duties, and hindered from mirth, because it has got beyond the time of sleigh-rides, and dances, and frolics. The old ought to amuse themselves in every lawful way. They will not find sport in so many things as the young find it, but there is all the more reason why they should make the most of the few amusements which are real to them. If there is pleasure in a hand at crib-

bage, or in a rubber of whist, let them take that, and take it often. If there is pleasure in telling stories of the olden time, and laughing at the old jokes, let them have them over, even if the children have heard these jokes twenty or fifty times, and fail to see humour in them. If an old man gets exhilaration from his fiddle in scraping out the worn sentimental tunes, let him have the joy, and let the young race bear in patience the trial of such melodies. Old age has no business with noisy amusements, with artificial excitements of any kind. Old people are out of place upon the race-ground, or in excursions, or in ball-rooms, or in caucuses, or in camp-meetings. But mild amusements are very proper even for men and women of four-score years. Beautiful and almost saintly is the white-haired organist, drawing from his instrument voices of the past which sound like the songs of angels.

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the fashion-plates of the last bulletin of the French dressmaker.

And not much better than this fraud of colour and raiment is the attempt to hide old age by shunning the ways of old age, and simulating the habits of youth. The old do not become young by affecting the exuberant spirits of youth, by joining enthusiastically in youthful sports, by riding in steeple-chases, or by capering in the ball-room. That innocent sport of dancing, which was commended in one of our previous essays, seems ludicrously out of place in a party of old people. A single quadrille may be ventured by way of reminiscence and to make fun for the children, but choosing partners in that amusement is not fit for octogenarians. The old are properly "afraid of that which is high," and have no business to run up stairs like impatient boys and girls. An old man can not run like a boy, with all his effort, and his panting and awkwardness only make his effort preposterous. He can not disguise his age, either, by talking about the affairs of young men, and taking their tone and their air, by growing earnest over boat-races, or ball-matches, or even college rank and college societies. Those things may have delighted him once, but no one will think that he is still a boy, because he seems to be so much interested in them.

Old age is a state which the fewest in this world reach. Most men and women never know that state, because they die prematurely. But for all who live long, the state is inevitable. There is such a thing as a "green old age," but the old age is as real when it is green as when it is sere and yellow; a fir tree may grow old as much as an oak tree. Some grow old more rapidly than others, but all who have lived to three-score years and ten are old, whatever their physical condition, or whatever prospect they may have for ten or twenty years more of life. It is better frankly to recognize this fact, and not be ashamed of it. It is foolish bravado for one to insist that he does not mean ever to be old, that he means to keep his youth to the day of his death; insincere, if he would have you understand that he had rather die in the middle of his days than live them out upon the earth. Old age is inevitable, if we would go through the proper term and round of life. It is old age just as much when it occupies stations which should seem to need the strength and fire of youth. Paul IV was an old man in the Papal Chair, though he brought there the vigour of a young Napoleon in his warfare with heresy, as old actually as Pius IX, who has surpassed in that chair the

years of any Pontiff. Lord Brougham was an old man, though he could speak at eighty-five like a young prophet in the meetings of the wise; and Lord Lyndhurst, too, more regular at that age in his place than any peer of them all. Goethe was an old man when he wrote his play of the Second Faust, full of fairy imaginations; and Jerome in Bethlehem was bent and haggard in age, though such ardent letters could get out to his converts from his cell. The beloved Disciple was an old man when he wrote his Gospel, though it told the same word which he heard in the far-off days when his young head rested on his Saviour's breast. Moses was an old man, a very old man, when he looked down from Pisgah upon the land of promise, though his eye was not dim or his natural force abated; and he had been an old man all through that desert-wandering. If Methuselah lived to be as old as the record tells, he had been an old man for nine hundred years before he died.

Old age is the necessary consequence and condition of length of days upon the earth. It is the penalty of that boon of long life, for which Gentiles pray not less than Jews. We can not have the Israelite blessing without the state in which the wise Preacher sees "no pleasure," and the Psalmist only "labor and sorrow." Yet there are means by which this Hebrew sentence upon old age may be mitigated, and by which this state of life may become a state of comparative comfort. There is such a thing as a serene and happy old age, even when this does not escape fleshly infirmities. It is not true of every veteran that he "lags superfluous on the stage." The play of old age may be as genuine as the play of youth, and its work as valuable. If it can not keep the vigour and force of youth, either in mind or body (no one ought to expect that), it can still keep real force, and have health enough to be happy. It is largely the fault of the old if they are nuisances in the world, and burdens upon the love of children and friends.

For old age, then, we have some special counsels, which we limit here to counsels for physical health. For in this time of life more than in any other time, health of soul depends upon health of body.

1. The first of these counsels is to *take regular exercise*. It is a mistake to suppose that the faltering step, and the stiffer joints, and the hardened bones, indicate indolence, and tell one to lie down in the house from morning until night. Exercise of the old bones and muscles is just as necessary as exercise of young bones and muscles. An old man need not frequ-

the gymnasium, or seek favour among the wrestlers. But he ought to be seen daily upon the street, and walk there as long as the power of motion lasts. There is no more cheering sight than the sight of a hale citizen of eighty, who has horses and carriages at his command, walking daily his mile and back to get his mail, upright and without a staff. Violent exercise of any kind is not fit for the old. They ought not to try their strength in any feats of agility, or do any thing against time. They ought not to tempt the weather as in the day of their youth—ought not to walk in storms, or in burning heats, or in the icy air. But in every pleasant day the blood of age ought to be stirred in its sluggish currents by reasonable exercise, whether in the house or on the highway. Not every old woman with broom in her hand is to be taken for a witch, or every old woman who stirs the caldron to seem as one of the weird sisters.

2. And this leads us to say that old age should not only have regular exercise, but also *some regular occupation*, some duty and service which may occupy body and mind, something more than a few *chore*s, the odds and ends of the house. *Juniore ad labores* is a good motto, but the *seniors* are not absolved from labour by reason of their age. Hard work, certainly, is unfit for old age. The veteran corps are not for the hard knocks, or the fore-front of the battle. But it is well for the old to keep part of the work to which they were accustomed, and not relinquish it utterly. An old merchant ought not to retire wholly from business, though he may make no longer any large ventures in the schemes of traffic. An old lawyer will do well to consult with his clients, even when he is not able to plead for them in the Court Room. An old physician ought to heed the patients who have trusted him so long, though he may no longer drive by night, or keep his sign conspicuous on the door. And it is a satisfaction for the aged grandmother that she can knit, if she can do nothing more. Work of some kind should come into the regular habits of old age.

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hood, the frame of men is not to be nourished by pap or by crusta. Good food, and enough of it, are for the latter time of life as much as for its stronger years, for the evening meal as much as for the noon-tide. Only let the food be adapted to the weakened powers of absorption and circulation. Physiologists are not yet agreed how far stimulating drinks may be used to warm the flow of blood, and awaken more nervous life in the worn bodies of the old. There is a notion that the strictness of total abstinence may be relaxed in the latter years of life, and that the aged may, for "often infirmities" and for the stomach's sake, be permitted to take a little wine. Hot tea is a perquisite of this class. If stimulating drinks are used by the old, the use should be sparing. Cool water is the safe beverage, as much at ninety as at nineteen.

6. Old people will find great relief in the *society of those who are younger*. Because the sympathies of the old are with each other, because they are likely to view things in the same way, and to have common memories, it by no means follows that they have no right to associate with young people. The young find advantage in the wisdom of the elders, and the elders find quickening in the enthusiasm of the younger race. No grandfather or grandmother ought to feel too old to take interest in what grandsons or granddaughters are doing. Jealousy of the young on the part of the old is absurd; envy of the young because they have so much more of life before them is futile. More wisely will the old try to encourage by sympathy their younger friends, and not cast gloom over their hilarity by standing aloof or prophesying ill. No elder in the house should be as a croaking raven, to make the young suspicious of their youth; but rather as Nestor, whom the young will love to have as witness and adviser. The old may not join in the sports of the young, but they ought to value and to use the privilege of aiding and cheering the young in their work and their pleasure.

7. Perhaps this may be comprehended in the final advice to old age, that it *keep up with the time*. Sadly the old are wont to lament that the good days are gone, that things are not now so comfortable and right as they were in the last generation, to call to mind the "good old time." They can not be gainsayed in this by the young, since these do not know what the world was before they were born. But nothing is gained in attempting to show those who are living now that the world was a great deal better before they were born. Let the old

make the best of the life which they have, of the days into which the Lord has prolonged their being, and not be for-ever bringing the superior brightness of the former years to put the light of the present time in shadow. Aneas in his new Italian adventure, need not tell the Etruscans of the heroes of windy Troy, as if all the brave men were of the hosts of Agamemnon and Priam. Webster and Clay, and Calhoun and Jackson, were great men, no doubt, but they are dead, and the old men of to-day are cotemporaries of Sumner and Schurz; and the living issues which these men represent are quite as important as the questions which have been settled by the statesmen of the former age. The old, while they live, have just as much at stake in the affairs of Church and of State as the young. The millionaire of eighty years, who sees his earnings perilled by the robberies of municipal thieves, has more interest in having those thieves brought to judgment than the youth who has his fortune yet to make. Old men ought to read Beecher's sermons as much as Baxter's *Saints' Rest*; ought to read *The Tribune* and *The Post* of to-day as much as the files of *The Federalist*; ought to read *The North American Review*, as it is edited by the grandson of John Quincy Adams, as much as the same Review when the grandfather wrote for it. Let old age keep up with the time, and go along with the time, in all its speculations and discoveries, in science or in art, in politics or in the ways of traffic, in morals or in religion.

THE MEDICAL TIMES says that it is very rare to find a man who has amassed even a competency by the practice of medicine. There are indeed many wealthy physicians, but they have generally become so either by inheritance, by marriage, or by transactions outside of their professional duties. A great many there are also who live by their practice, perhaps even handsomely, but who have laid up absolutely nothing towards the support of their families in the event of sickness or death. Nor is this always avoidable. The study of medicine is itself so costly, the expenditures necessarily incurred in practice are so great, and the money returns for some years so inadequate, that the embarrassments of early professional life are in many cases hardly shaken off before the energies begin to wane. Ill health does not always wait for old age, but is sometimes brought on by the very activity with which the labors of the profession are undertaken.

rain. They sleep on a rug, if they have one; sometimes on a mattress, which is rolled together in the morning; but if they do not have these, they sleep on the floor. There is no need of locks and bolts to keep away midnight-robbers, for there is perfect security. They can lie down at night without the least apprehension, as there is nothing to steal but children, and as all seem to be amply supplied with this blessing, there is but little danger that any one will steal an extra mouth; for every child is but an additional expense to the family—a mouth to fill with food. Clothing is not of so much consideration as food; for if the parents are very poor, the children can run about without any extra clothing than the skin that Nature gives them, unless it is a little turban for the head and a string of beads for the neck. I have seen several villages of naked children on the Nile, for the children can wear a simple sack which is all that many do wear, and this they never take off till it is too much tattered to hold together, but eat, drink, and sleep in it. However, there is very little rain in Egypt, or it would flood these tenements and destroy them. Those situated on the banks of the Nile, where there is the annual flooding of the river, must be destroyed every year, and what becomes of the dogs, donkeys, and children it is difficult to tell.

Fortunately, the soul and body of the Egyptian is not hung together by as fine a cord as the bridge of Al Serat was—the bridge that Mahomet said was as fine as the edge of a scimitar, and yet it was the one that all true believers must cross before they could enter Paradise. If this had been the case, there would be many more divorces between the soul and body than we see at present. Fortunately, too, the people are easily fed and nourished. A child or adult is satisfied with a morsel of black bread, made out of coarse wheat or from Indian corn, that has been ground in mills formed of two stones, by the women, who add salt and water, and after kneading or pressing it, bake it in small loaves or thin cakes; to this bread they sometimes add a bit of sugar-cane that grows abundantly. We have seen the people of all ages chewing this from morning till night; or they will add a slice of cheese, a turnip, a few onions, lentil soup, radish leaves and root, beans and bean-leaves, peas and pea-pods. Nothing that grows comes amiss. The stomach of an Arab must be like a shoddy-mill. All kinds of fabrics old and new, woolen and cotton, are thrown into the hopper and ground up together, and if perchance there is sufficient woolen to sanctify the curious admixture, there comes forth a kind of

fabric, yclept woolen cloth, so with these Arab stomachs, all kinds of green things are thrown into them, and if perchance there is even a limited quantity of nutritious matter the assimilative organs appropriate it till anon it makes quite a decent Arab. I have seen a family eating together out of the same dish, without any knives or forks, and they appeared to eat with as much gusto as those of us who belong to the civilised portion of community do with all our utensils and various dishes. Still, with a very little attention their comforts of life could be increased; but they do not seem to have any outward aspirations after a better state of things. It may be that they have been obliged to clip the wings of their ambition, and have yielded to what they call their fate or destiny. With the best possible grace, knowing that resistance to the “powers that be” is of no avail. It is very common for them to say,—*Malah* never mind; or *Mashallah*—it is God’s will: hence we must submit.

The train made many stoppages on the way at these different villages, and whenever we made any halt, the people from the nearest village came in squads to the carriage windows. Some brought sherbet and lemonade which were refreshing drinks on that warm afternoon. Some brought earthen jars filled with water. It was interesting to see every one who patronized the water-bearers drink out of the neck of the jar; but in Egypt one must do as the Egyptians do. Some had luscious oranges for sale, almost at our own prices, while many came from curiosity to see the foreigners or Europeans with whom the first-class carriages were filled. Such a chattering and talking we heard all around us, as though something unusual had occurred; but we soon learned that loquacity is a peculiarity of the Arab character. It was amusing to hear the young vendors of eatables and drinkables attempt to talk English when they discovered that the English tongue was our vernacular. The Arabs learn many of the most ordinary phrases or common expressions with extraordinary facility, and they generally use these correctly. When they have the opportunity to attend school they learn different languages, with ease, and some of them are walking polyglots. I have seen guides and dragomen who could speak six different languages, and yet were not specially educated in other things. There were many women and children picking cotton in the fields on the sides of the railroad, and occasionally we heard their rude music made with a reed flute. Their musical instruments are simple, and their songs are a kind of

low wailing or chanting. They appear to have but two or three notes in their voices, and they sing with these their monotonous songs. Sometimes the women have tambourines and keep time to the music of others by these, or by clapping their hands together, but the organ of tune is not prominently developed in their craniums. As the afternoon waned, by the glimmering light of the departing day I saw a Moslem at worship in the fields, I wondered if God heard his heart-utterances. Who shall dare to decide this point? This poor untutored Arab may have been as sincere in living up to the highest light within his soul, as he was faithfully attending to his evening devotions, as the most rigid Christian in a Christian land who obeys the instincts of his moral nature that has been enlightened by a more elevated faith, is, when he bends the knee in prayer and proclaims that his creed consists of love to God and love to man. At the great Judgment Day many a faithful Moslem who has had limited opportunities for development may rise up in judgment against those who have been blessed with far greater privileges that they have not improved.

How many sites of old towns renowned in history we rode through on the railroad, it is impossible to ascertain. It is supposed that we passed over Sais, which was once a glorious city, with a magnificent temple, adorned with statues, but now there are only a few traces of its former glory left to tell the mournful tale, that decay is at work everywhere. The only monuments of man that survive the ravages of time are those made of stone, but even these eventually crumble, with but few exceptions. Man and his works pass away from the earth after a few centuries, and but few traces of his glory remain.

When the sun went down and the dark curtains of night shrouded the azure sky, we gladly wrapped our shawls around us to shield us from the cold night air that penetrated us as much as the warm rays of the sun had heated us at mid-day. Those who do not notice the changes of temperature, and there are the greatest extremes between that of the morning and evening and the noon-day, and at the same time provide for them by wearing extra clothing when it is cold, are sure to suffer from the effects of the climate, as they call it, while in reality it is from their own carelessness or indiscretion. It was 10 o'clock before we arrived at the city of domes and minarets, Cairo—the city supposed to be built on the site of Ramesses, from which the Children of Israel set out on

their long and weary pilgrimage of forty years through Goshen into the heart of the Desert, in search of the Promised Land.

All nations are represented here. There is no better place to observe the panorama of Cairo life than from the front piazza of Stephen's Hotel, which is well protected from the sun by an awning. It seemed as if a great kaleidoscope was hung up before our eyes, and that through it we saw at every glance a constant succession of new scenes, that interested us from their novelty. Dancing dogs, performing monkeys, jugglers of every description, donkeys and donkey boys, splendid carriages with outriders, liveried footmen and Arab runners in their turn amused us. There were also men of every shade of color, of every complexion, the Copt, the Bedouin, the Nubian, the full-blooded Negro, the Jew, the Greek, the Barbarian, the Turk, the Syrian, the Frenchman, the Englishman, each constituting a distinctive type, so far as the outward manifestation of the characteristics that distinguish his own race from that of others is concerned; each bearing in his own bosom the prejudices that belong "*per se*," to his own nation; never amalgamating nor assimilating to those with whom he comes in daily contact.

If we could have removed the mental pericardium and pierced the innermost recesses of their souls, it would have been an exceedingly interesting metaphysical study to have attempted to decipher the thoughts that agitated the breasts of those individuals who were passing their daily lives in close proximity, each chasing after the phantom Happiness, according to his own ideal of what it consists. After all, happiness is only a relative term, depending entirely on the individual. This world is wide enough for every one to live up to his own ideal, without jostling his neighbor, though circumstances may oftentimes compel one to remain in a certain locality or in a certain position when the individual may aspire after another phase of life. If a person who dislikes perfumes were compelled to live near the bazaar where attar of roses were sold in Constantinople, or where drugs were compounded in the same city, he might wish he were blessed with the privileges of the Bedouin of the Desert and were able to take up his tent and remove it to the ends of the earth, or away from human habitations, if he liked to do so. Unless one carries the secret of happiness in his own bosom, external surroundings never add to the modicum of enjoyment; and if one has learned the secret, it is possible to be happy in

spite of circumstances, however adverse these may be.

Shepherd's Hotel is situated in the Ushakieh, a large public square, in which there are pretty gardens and fine shade-trees. Some of the best hotels are situated in this district. It was formerly a marsh, and was filled with water during the inundation of the Nile, and the miasmas arising from it during the dry season were a prolific source of fevers. A canal has been cut around it to encircle it, and the healthiness of Cairo has increased. This would prove to the Arabs, if they would think or reason from cause to effect, and *vice versa*, that attention paid to sanitary laws brought its own recompense of health to the people. The Arab looks upon sickness as a kind of fatality sent by Allah; they must accept it. If Allah wills that they shall recover, they will do so. If Allah wills that they shall die, they must die; and if they die in the faith, they are sure to go to Paradise; therefore the sooner they die the better. This, to a majority of the people, would be a blessed exchange, at least in a material sense. On this account, many are induced to join the armies of the Viceroy and Sultan, and go into the thickest of the battle with enthusiasm, expecting certain death. Still, there is a spark of human nature left in the bosoms of some of them, for they have resorted to all sorts of expedients to evade the conscription. Parents have cut off joints from the fingers of their children, extracted their front teeth, and even put out an eye, that their children may thereby be unfitted for war. A stranger may well be surprised to see so many maimed in these ways. The Viceroy, when pressed for men, ordered a regiment to be formed of those whose left hands were whole, and called it the left-handed regiment. Then he had one formed of one-eyed men. It will take a very clever Arab to circumvent the Viceroy, who has complete sway over his people. In many respects he has introduced improvements into Egypt that will eventually be of benefit to his people, but they are subservient to him in every way. Perhaps if he had been called to rule over an enlightened nation, he would have been a different ruler. He now acts on the policy that "might gives right."

Some of the first things that strike the eye are the mosques, with their tall and graceful minarets, so slender and delicate that it almost seems as if a hard wind would blow them down. As the Cathedrals are to Italy, so are the Mosques to the East. They are, for "the faithful," fitting places where they as-

semble daily and practice their devotions. They are sacred shrines, and so sacred that many of them were shut to all but the faithful until within a few years. Now a *silver key* will unlock their doors, and provided the shoes that have been worn in the streets are removed, all can at the present time gain admittance, but not to their regular services. At these all are excluded but the Moslems; and as in their eyes the Moslems are the only real candidates for Paradise, it would be a profanation to allow the outside world to sit in solemn assemblies and hear the Koran read. There are no bells on the minarets, hence the Muezzin, from the upper, outward gallery of the minaret, in his loud, shrill voice, calls the people to prayer.

There are about four hundred mosques in Cairo. It would be a matter of surprise to see so many mosques at the East, if we did not know that Mahomet encouraged his wealthy followers to build as many mosques as possible, promising that every one who should build a mosque on earth should have one in Paradise, covered with diamonds, and filled with all kinds of precious stones, and that the builders should be crowned with eternal happiness. Then, as the idea was prevalent to attach a tomb to a mosque, all the Sultans and Pashas who could possibly have a holy resting-place for their bones have managed to erect one, and leave it and their bones to posterity. We visited some of the most noted, for it would have taken about as long to visit them all as the three hundred and sixty-five churches in Rome, and a few are a type of the rest. The tombs and mosques of the Mameluke kings, called by some the Tombs of the Caliphs, were formerly magnificent, but are now rather dilapidated, and have no special interest save from the fact that they were erected about five hundred years ago. They still have choice bits of mosaic work about them, also fine domes and still finer minarets.

The Mosque of Mahomet Ali at the Citadel is one of the finest in Cairo. The Citadel itself is an interesting place to visit. It is on an eminence overlooking the city and the surrounding country, hence the view from it is very grand and imposing. The fertile land of Goshen is on one side and the Pyramids on the other, with the River Nile in the distance, and the Great Arabian Desert lies beyond. There are high walls and massive gates to the Citadel, and it is well fortified. An enemy who should gain possession of its heights could at once send shot and shell into Cairo. It was here that the well-known tragedy was enacted by Mahomet Ali, one of the boldest, cruellest, and most effi-

cient of all the Pashas that has governed Egypt. He became jealous of the Mamelukes, who had ruled Egypt previously to his accession. Though they manifested friendship for him, I suppose he judged them by himself; and as he resorted to every measure to remove all the obstacles that came in his pathway, he secretly feared they might consider that he was in their way; so he invited them to a sumptuous dinner to celebrate the departure of his son, Toussan, who was setting out on a warlike expedition to exterminate some of their enemies. Truly, the kisses of such a friend are dangerous. These unsuspecting Mamelukes came—gaily attired in their gayest colors, with their noble horses, equally adorned with their rich caparisons. After the feast was ended and they prepared to depart, they found the outer gates locked. Then there crept into their bosoms a cold tremor—that a snare had been laid for them was evident, and soon apparent, for a signal being given, there was an indiscriminate massacre of these gallant men; and every one perished, save Emin Bey, who found a breach in the wall, and with an insane desire for life, gave what might have seemed to him a death-leap with his horse down the yawning precipice. Strange to say, though the horse was killed, the intrepid Mameluke survived. Mahomet Ali, not satisfied with doing his work by halves, had all their families massacred, and only twelve or fifteen individuals survived to tell the awful tale, the recital of which is sufficient to brand the name of Mahomet with ignominy wherever this tale shall be told. Had they made a plot to usurp the power that had been wrested from them, it would have been different, but they were peaceful, well-disposed Arabs, and were slaughtered in cold blood by a blood-thirsty tyrant. His royal palace was at the Citadel, and near it is his magnificent mosque, in which is his regal tomb. He had commenced building this mosque six years before his death, and expended upon it nearly a million of pounds, when others completed it after his death. The entire floor is carpeted with Turkey-carpets, and there is a magnificent chandelier and numerous hanging glass lamps from the ceiling. The interior walls are of alabaster, and there are forty-eight large massive columns that support the colonnade around the mosque. There is a beautiful alabaster fountain connected with it, for "the faithful" are compelled to make their ablutions before their prayers, however often they may pray; cleanliness being one of the cardinal points of their strange faith. The windows are of beautifully stained glass. Every deco-

ration that can be added has been. There are no statues, no paintings, as in the churches of Italy, for the express command of Mahomet was that they should have no adornment of this kind. It seems more like a drawing-room of a large palace, than a church. We saw the tomb of Mahomet Ali in the mosque. It has a covering of rich Cashmere shawls. His hat and some of the insignia of his office are there preserved. There are no seats in the mosques for the people, as none are needed. Their devotional exercises being genuflections of the body rather than silent meditation, they stand or sit on the floor. We stopped on the outside, after exchanging holy slippers for our walking-boots, to take a drink at Joseph's Well. The Arabs believe that Joseph and Mary stopped here when they were fleeing into Egypt. It is two hundred and sixty feet deep, and was built or dug by the old Egyptians. For many years it was filled up with sand. When Joseph Saladdin, at the time of the Crusades had it redug, some say it was named for him; others affirm that it was made by the Joseph who was sold into Egypt.

The Mosque of Amer in old Cairo is said to be one of the oldest mosques, and is believed to be one thousand years old. There is a tradition that when this mosque is destroyed the power of the Mohammedan religion will be broken. There are two stone pillars in it, only a few inches apart. Before the outside world were admitted freely into the mosques, it was declared that this was a true test whether a Mussulman would go to Paradise when he died. If he could pass through these, he was sure of his future. According to this, only the lean Christians would be admitted within the shining city of bliss. There is always a platform or elevated pulpit, from which the priest reads the Koran to the people, in all of the mosques here.

There is in old Cairo an old Coptic Church. In the crypt there are the old arches and pillars that have become hoary with age. There is a small grotto here where, it is said, Mary and the infant Jesus were concealed when they fled from the persecutions of Herod. This little grotto may have been the identical retreat where the weary-footed pilgrim rested. How I longed for faith enough to believe this tradition. It may be enough for us to know that it was into Egypt that she came with the precious child, who was destined to live a life such as no other child had ever lived, and to exert an influence that should be felt throughout the wide earth.

Lessons from the Chicago Disaster.*

BY THOMAS K. BEECHER.

REV. 18: 16, 17.—Alas, alas, that great city, that was clothed in fine linen and purple and scarlet, and decked with precious stones and gold and pearls! For in one hour so great riches is come to naught.

BY the text, without further introduction, you perceive that I would speak to you of Chicago. When a great event commands universal attention, there are as many different lines of thought produced by it as there are different souls, each one tuned according to its nature and culture.

As when a peal of thunder fills the dome above us, every vibrating object responds, some with one tone and some with another; so in human experience when any one event startles and thrills mankind, the response, that is to say, the quickened thought, depends entirely upon the nature of the one thinking.

I propose, therefore, this morning to share with you some thoughts that have been quickened in one possessed by a Christian's faith and a Christian's hope.

I. How happened Chicago to be a great city? The reasons are in part creditable and in part discreditable, according to the Christian's standard.

Water is Nature's highway. The commerce of the world goes afloat. And commerce needs harbors. Upon our great lakes there are no harbors except there be first a river. The bar setting out into the lake from this river makes a natural breakwater, easily improved, while the river itself furnishes a long canal-like harbor where shipping may lie in safety.

Chicago River, therefore, is the cause of Chicago City. In the days when the grain crop of the West must come East wholly by water after it left the farm-wagon, Milwaukee with its harbor would take all the wagon-loads from a certain region, and Chicago with its harbor would take all the wagon-loads within another circle, and St. Louis with its river-ways all within a third circle. These three cities would therefore be natural equals so long as commerce is confined to farm-wagons and water.

By and by, however, with the increase of capital, railways were laid throughout the entire State of Illinois, at a time when as yet St. Louis was suffering under the incubus of slavery, which—whatever good it may accomplish

—is certainly a discouragement to individual energy and enterprise. Go-ahead cities have never been known in lands where slaves are owned.

When, then, railways were laid down in Illinois, they brought more to Chicago than to St. Louis, because Chicago was free and St. Louis in bonds.

The railways of Illinois must come to the great highway of nations somewhere on the lake, and there was no other place to which they could come but Chicago.

Looking to the Northwest again, we find the great Lake Michigan at its upper outlet frozen and impassable at least three months and sometimes five months in the year; so that great sheet of water ceases to be a highway of commerce for at least one-fourth of the time. Hence it must be flanked. And Chicago stands at the flank.

The entire commerce, therefore, of the great Northwest must come flowing down toward Chicago, for it is unable to pass the head of Lake Michigan in any other way; and as every road wished to turn the Michigan corner as soon as possible, they all turned it of course at or near Chicago again. Hence the railway system of Illinois, Iowa, and Wisconsin of necessity focalized at Chicago. If commerce desired an outlet over the lake from the South, Chicago was the port. If commerce, obstructed by the ice, must needs get round Lake Michigan by rail, Chicago was the toll-gate. Hence, summer and winter, Chicago was on the highway of commerce.

This, in few words, is the cause of Chicago's enormous growth and development.

Within the last ten years, however, the incubus—Slavery—had been lifted from St. Louis, and the resources of the State of Missouri—a State as rich or richer than Pennsylvania herself—had begun to be developed, and the grain and fruit crops of Illinois had begun to flow west and southward and find the Missouri, Mississippi, and Ohio Rivers; so that already St. Louis had begun to equal, and was promising to surpass Chicago in greatness and wealth.

What time the frost permits rivers to be used, St. Louis reaches a wider extent of territory than any city the world ever saw. And what time the frost closes the rivers, our modern

* A Discourse delivered in Elmira, October 15, 1871.

system of railways, that always follow the river valleys, makes the stream of commerce almost as broad and deep during the months of ice as during the months of spring and summer.

I do not know that you will remember the prediction, nevertheless I am able to make it, that with the check now experienced by Chicago the race between her and St. Louis is ended. St. Louis is to be the great city of the interior, and, I suspect, the great city of the world, and Chicago will not regain her pre-eminence. There will always be a large city there commanding the commerce of the Northwest, but St. Louis will be the commercial center of a far larger area, and in time, I suspect, the capital of the United States.

—But all this does not sound much like a sermon. I have called your attention to it that you may perceive that in part Chicago was naturally and legitimately great, and in part artificially and unjustly great. A commercial city that takes toll without conferring value becomes artificially great. A great city which furnishes advantages and facilitates the flow of commercial value is naturally great. The law for cities as for individuals is the same. A value received without a value given is always a wrong, and must sooner or later bring a bloated prosperity.

In the early days of Chicago, before railways, the capital that built modest horse-power elevators and grain warehouses, and stored the little loads of farm-wagons till a ship load should be accumulated, and then discharged it into sloops and schooners which took their voyage around Mackinaw—facilitated commerce. It made possible that which otherwise had been impossible—the gathering of grain in good order and sending it in large cargoes from the abundant market in the West to the needy market of the East.

By and by this same city of Chicago, by her situation as I have indicated, becomes a focus of railways. If, now, every railway train must disgorge its grain, and pay for unloading and storing and loading up again, Chicago has not facilitated commerce but has hindered commerce. Like the little State of Denmark that, for I know not how many centuries, has, till recently, exacted tribute from the commerce of the world passing into the Baltic, merely because she owned the Straits through which commerce must pass, and could exact the tribute; so Chicago owned the territory over which the railways must pass; and capital, buying railways and warehouses, and establishing banks, has required tolls and storages and inspection,

and commissions and insurances, and bank discounts; so that the grain trade of the West has left fabulous sums in Chicago, for which this queenly city, as God takes account, would be unable to declare that she had given a value.

And as in all cases of wealth thus gotten by might without right, the vices which accompany such gains characterized this great city to an unusual degree. I have only to speak of *grain gamblers*, and every business man that hears me understands a range of transactions which for positive iniquity are not surpassed by any of the most exciting transactions, schemes, and corners of Wall Street.

Still further, the State of Illinois is a prairie State. During the four years of my residence there, I never saw a bit of pine except what came in packing boxes to the merchants. Michigan is rich with pine woods. Here, then, we have a great State needing lumber and another State abounding in lumber, and Chicago standing between the two to handle this trade. Hence Chicago became the largest lumber market in the world. And as a verification of what I have already stated about grain, her trade in lumber was legitimate; she received her cargoes safely from the stormy waters of Lake Michigan. She stored them. She loaded them upon cars. She forwarded and distributed the stream. You have not heard of lumber gambling in Chicago. The reason is that that trade was legitimate, while the grain trade was largely artificial and a part of her gains illegitimate.

The world will never see a permanently prosperous city that shall outlive the ages, until that prosperity is founded upon genuine Christian honesty—an honesty that scorns to receive any gain except it comes ennobled by a consciousness of value rendered—not merely lawful gains, but gains well earned!

Chicago's extremity is St. Louis' opportunity. And you shall see that not only in legitimate gains but by all possible gains, without any fastidiousness as to their legitimacy, St. Louis will now enter upon a period of growth surpassing that which Chicago ever boasted. And with her rapid growth shall come her rottenness and feebleness, and in time some great disaster shall overtake her.

Passing from these general statements, I would have you notice and remember, in the light of last week's experience:

II. The absolute unity of human interests—the solidarity of our welfare as men.

There is no bank or counting-room whose annual transactions amount to half a million dollars in any part of the telegraphic world.

that is not at this moment affected and its policy in a measure adjusted by the news of the Chicago fire. We have read a thousand times, "If one member suffer all suffer," so Paul wrote as regards the ideal Christian church. And while we as Christians are often reproached as dreamers when we look for the fulfillment of our Lord's prayer—that they all may be one—the slow and painful and costly advance of commercial civilization is demonstrating, in spite of men's selfishness, that the interests of mankind are really one. And whether we can make out the account in detail or not, we may be perfectly sure that no great number of our fellow-men can be suddenly cast down into want and suffering, and leave the remainder untouched, unharmed.

It is yet too soon to measure the great wave that is to sweep over the commercial world in consequence of the Chicago fire. Its height and destructive power will be greater or less according to the selfish stupidity or the Christian intelligence of the parties affected by it. If the first law of Nature—self-preservation, be the one obeyed throughout this land, and every capitalist, fearing loss, begins to gather in and exact his dues, and fortify, there will be a stringency in money and an amount of suffering and general collapse of value, the like of which none of us have ever seen.

What we call a panic is usually nine-tenths panic and one-tenth fact.

The great value in modern commerce is confidence or credit, and it is a real value. When, by the loss of a few hundred thousand, as when the Life and Trust Company failed in '57, there rises in a great multitude of minds at the same instant, suspicion, distrust, and fear, the loss of material value was, let us say, half a million. The loss of credit and confidence which caused the whole sphere of commerce to collapse mounted up to hundreds of millions in its costly consequences.

But, now, in this present case the actual fact of loss amounts up to a hundred and fifty millions of value destroyed. If, now, we destroy as much confidence and credit in proportion as was destroyed in '57, depend upon it we are standing upon the brink of a mighty collapse in the entire commercial world.

But I am not without hope, nay I may almost say expectation that, since this destruction of value in Chicago is a casualty and does not provoke the disappointed creditors to suspect their debtors, but does not excite an instant outgush of sympathy and compassion—I am not without expectation, I say, that the destruction will

be limited to material value; that compassion will quench the fires of suspicion; that bankers and capitalists generally will trust each other more than they ever did before, instead of less; and men shall see that the commercial world can stand a loss of a hundred and fifty millions and feel it less than when they lost half a million and credit and confidence at the same time. If we are able to weather the present disaster without wide-spread financial convulsion and panic, it will be evidence that commercial men and capitalists have really advanced in comprehension and magnanimity. Let us hope for the best, yet not be surprised at the worst.

III. I would have you notice next, the problem of insurance and the lessons contained in it to the Christian thinker.

Set down the loss at Chicago at two hundred million dollars. I am sure I do not know at what figure to estimate the active capital of the commercial world. It must extend to sums so vast that were I to speak them they would mean nothing. But I am safe in saying that if the world's capital, at this moment could be assessed one-half of one per cent. and the proceeds of the tax laid down to the credit of Chicago, it would pay her entire loss, build her ruins, and leave her richer than she ever was before. That is, if every commercial man in the world would put in half a cent for each dollar of his capital, Chicago could be rebuilt three or four times over. We might laugh at loss. It would not be felt.

And this, you perceive, is the problem of insurance. Those companies whose business covers so large a territory and whose capital mounts up to so many millions that they are able to draw from a very wide area of income to pay their losses in Chicago, those companies can pay and keep on doing business. Younger and smaller companies, whose risks cover a small territory and whose capital is from a quarter to a half million, can only pour their pittance of dollars into the great abyss—as if a man had gone with a pailful of water to quench the fire that made the abyss. Could we have turned an ocean of water on to the raging fire, we could have put it out. Could we turn an ocean of Christian sympathy on to the ruins made by the fire, we could rebuild them.

Thus you perceive that insurance—selfish business-like insurance, resolves itself into a Christian proceeding. Just see how Christian, if you had only known it.

You went to the insurance office and paid fifty dollars to insure your house against loss by fire. I do not say there was any thing Chris

tian in that, but suppose a wider thought had been in your heart and you had said, "Somebody's house is sure to burn up, and I am determined to do my full share in making up loss wherever it occurs; so I will go to the insurance office and not wait for the fire to take place. I will pay in my fifty dollars and tell the agent to see that nobody suffers any loss by fire. So I will 'make friends of the mammon of unrighteousness.'" Do you not see that what we have been doing during the past week, making a contribution to relieve Chicago, is only the same thing that we have been doing the last year before the fire when we paid premiums on our insurances. The millions of loss paid by solvent companies are made up of thousands of little premium-payments—in other words we contributed largely to help Chicago, before Chicago met her loss! The only difference is that we paid more liberally to save ourselves than we would to save others. This is natural, but it is not Christian.

Suppose, then, that from this moment all men should agree to act like brothers and help one another in affliction of any sort. Do you not see that this would be at once universal insurance, universal love, universal Christianity?

So, slowly and painfully, cautiously and selfishly, the wrath of man is praising God. And we are compelled to acknowledge the beauty of the Christian commonwealth in every little device of safety which we have invented for our own defense.

And now in view of the varied suggestions that have come up in the minds of the benevolent for distributing this great burden, any one of which are almost feasible, I would have you:

IV. Notice what it is that stands in the way of this general problem of insurance, and of magnificent help to great communities suffering disaster. Notice it and note it.

I have heard or read various practicable devices for the relief of Chicago. It would be a simple thing for the Legislature of Illinois to issue fifty million bonds running ten years—call them Chicago bonds; or, what would amount to the same thing, the Legislature might endorse the bonds of the city herself. Our Congress at its coming session might issue a hundred million bonds; or might return to circulation a hundred million greenbacks, establishing a loan office in the city of Chicago and lending currency at long times and low rates. Or a tax of one mill on a dollar might be laid upon the citizens of the United States, and the proceeds handed over to a fund for the use of

the Chicago sufferers. Many towns have already voted quite large sums to be raised by tax. And finally, as we have seen under my last head, if men were only Christian brothers, a society of universal insurance might go into operation at once, and every human being insured against loss by fire at a cost far less than what we now pay for imperfect protection at the hands of smaller companies.

Why is it, then, that a prudent man must needs shake his head against all these propositions? The answer is, that as yet our race is not so far advanced in integrity that we can furnish the requisite number of men to handle these immense relief funds raised by organization and indirect tax, without absorbing, not to say embezzling them. Where there is a million dollars to be spent, there will be found selfish men scheming for commissionerships to superintend the spending; not that they may accomplish the greatest good at the least cost but that they may receive the largest profit they lawfully can from their work of distribution. Where the carcass is there the eagles are gathered together. I care not how holy the cause, whether it be a Methodist Book Concern or the American Tract Society, or a Missionary Society, when its financial operations reach a half million or a million, you may depend upon it that selfish and dishonest men have crept in; that great society and so thoroughly infested that it can not be purged in any way except by destruction.

Or, on the other hand, if we could find, being guided thereto by the omniscience of God, suitable men to administer the nation's bounty to these distressed citizens of Chicago, and even one of these men should administer the same at great personal sacrifice, there would be instantly raised round about them from the vast pack of hungry outsiders longing to get in, a cry of "fraud" and condemnation, so that the hands of even these honest administrators would be hindered and their work made well nigh impossible by the distrust and suspicion where we visit our public men.

Here are two great evils which have come upon us of which I shall have need to speak to you again ere long. One is that so few of our public men deserve to be trusted; the other is that so few of us citizens are willing to trust them. It is here that our thoughtless game of politics is so exciting to those engaged in it, has engendered not only the few thousand or million dollars that are put up as stakes, but what is far more valuable, has squandered the character and reputation of our public men, and eradicated

the loyal graces which should belong to trustful, intelligent citizens.

You all know what caution an insurance agent has need to practice when dealing with many classes of our fellow-citizens. You know that no company is willing to insure up to the full value of possible loss. Why is it, I ask you, that when my piano is worth a thousand dollars, I can not get any more insurance on it than eight hundred? I answer, because the directors of our companies understand human nature, that if they insure pianos or other property to the full value, the time will come when the owners would gladly sell in order to realize cash; and the easiest way for them to sell would be to burn and collect the insurance.

Why shall not our Congress issue bonds to relieve Chicago? Answer, because many members of Congress are already widely known as jobbers in legislation, and the fiscal agents of Government are widely known as being many of them far from clean-handed. Hence all prudent men and patriots, when a proposal is made to lay a tax or issue bonds to relieve this great want in Chicago, reply "No, no. This giving gifts by Government means ten cents to the suffering and ninety cents to the thieves."

Hence it comes to pass that all our philanthropy and desire to aid our fellow-men when they come into great distress, has and can have no advantage of organization. It can not avail itself of any societies on a large scale. We can get no help from Government. Alas for the days when wise men have need to say, "Let us leave as little in the hands of Government as we can, and demit as much as possible to individual energy, that thus selfishness may keep guard against knavery."

If you ask me, then, in fewest words to tell you why no widely organized plans of relief are possible as yet among men, I answer, It is because organizations are officered by Tweeds and Connollys and Murphys and Hodges and Fowlers and Baileys; in our relation to public affairs we have all gone wrong, placing party fidelity higher than personal integrity.

At the risk of being a little too long, I will add further:

V. The smoke that has overhung our valley for these many days was a swift messenger from any scattered fires. If you have noticed the title paragraphs which have been frequent in our newspapers of late, there have been an unusual number of fires in Michigan, Wisconsin, and Iowa, and Minnesota, destroying many residences and reducing thousands to want. The arc of the Chicago fire gathers to it every eye,

and the hardest hearted are a little softened by the spectacle of such concentrated suffering.

It seems to me, however, that the truly thoughtful Christian can not escape from the distributed sorrows which are round about us every day; and the compassion, the active sympathy we feel toward this great city burned, is a sample in kind of the perpetual frame of mind of a true Christian. What I mean is this; in any day that you choose to select if God were to sweep into one heap all the suffering and disappointment, all the hunger and nakedness, all the sickness and bereavement, all the violence and casualties—in a single word, all the woe that he sees within the bounds of the United States alone, this heap thus gathered would well nigh equal the glowing beacon of distress which has arrested every eye during the past week.

It is well perhaps that we do not and can not feel the real facts every day that we live of human sorrow. But it is well for the thoughtful Christian not infrequently, especially in the days of his transient prosperity, to look upon the woe of our fellow-men as God looks upon it, and by it be certified of two things; first, that a curse will attend upon my luxury while my brother, a son of God, is suffering want; and, second, that the time for our out-blossoming, like the prairies in spring, into forms of beauty and highest culture, is not yet come. The Church of Christ, the great Redeemer, is yet redeeming, and we are not our own. No man that would be a Christian can possibly live for himself. He is less than a man who can have heard and not felt the woe of Chicago during the past week. Equally is he less than a man—far less than a Christian man, who is not sometimes and often overpowered and oppressed by the woe of mankind which brought Jesus Christ from Heaven.

But some of you may be feeling that, after all you have not heard a Christian sermon this morning, but only a rambling lecture of geography, political economy, politics, and philanthropy. Where is the Christian thought? I ask you to read to-day as you have time the Book of Revelation from chapter eighteen to the end, and you shall there see two great cities in contrast—one, Babylon, the other, the New Jerusalem, and these two pictures are the most detailed and highly-colored pictures that we have in the Bible, of Heaven as contrasted with this life.

It is in our great cities now, that Satan works out his most brilliant and plausible results. You know how strongly the city attracts the country. Yet it is an attraction to excitement.

dissipation, shortened life, and unspeakable corruptions.

But by and by—so runs the promise, there is to be a city with foundations, which shall gather in the redeemed and the deserving from all lands. The citizens shall be closely, compactly organized. But there shall be an end of corruption, cruel competitions, secret wrongs, falsehoods, and hardness of heart. The city shall come down from God out of Heaven. The citizens shall be trusting and trustworthy. Satan's counterfeits shall be overthrown with him—his Babylons overturned. The genuine city of God established.

—A Christian is one who conforms to his coming citizenship—and is not spotted by the city ways of to-day.

Therefore, while the men of Chicago are running hither and thither along their hot streets and eyeing their smoking ruins; while the citizens of New York are scarcely less afflicted by the survey of their helplessness under a corrupt and thieving government, which is a terror to the good and a rewarder of evil; I have, if you please to call it so, dreamed of the Christian city—the city thriving by legitimate commerce, and not bloated with tolls and taxes extorted by

might, of the Christian brotherhood of man standing shoulder to shoulder to ward off danger or remedy loss by universal insurance.

I have thought to quicken in you a sense of our possibilities as a race; a sense of the fact that self-love is sooner or later suicidal; to show you that integrity lost, breeds distrust; and distrust separates men and makes long prosperities impossible, and works of splendid philanthropy impracticable.

I entreat you believe in cities. Not in Chicago, New York, and similar Babylons, but in the city of God. I entreat you so believe in the city of God, that like Daniel in Babylon, however high your standing here, you shall be known as a Christian citizen—many times in the day praying with windows open toward the Holy City.

Depend upon it, the meek shall yet inherit the earth, the poor in spirit Heaven—and the pure in heart shall see God.

Be ye not conformed to this world, but be ye transformed in the spirits of your minds, that ye may prove what is the acceptable will of God concerning you—a citizenship in the heavenly city.

Abnormal Longevity of Man.

BY E. RAY LANKESTER, B. A., OXFORD.

A FEW words remain to be said on this subject from a general point of view. It has been often treated of under the head of Longevity by able writers and curious speculators. An article in *The Quarterly Review* of January, 1868, and one in *The Fortnightly Review* of April, 1869, contain details on this matter which it would be, on that account, superfluous to introduce here, and which, moreover, have a very restricted interest. Abnormal longevity must not be confused with normal potential longevity, nor even with absolute potential longevity. There is a normal potential height for various groups and classes of men, namely, that which they may be expected to reach, accidents of death, etc., being avoided. There is an absolute potential height, the greatest height which any one man of such a group,

under the most favorable conditions, could be expected to attain; and there is the abnormal height of the giant, extending even to nine feet, and recognized as monstrous. Just so with longevity, there are three such terms possible, and there appears to be no *a priori* reason for excluding the last or abnormal longevity from recognition. Sir George Corneswall Lewis and others have endeavored to throw doubt on the possibility of man's longevity exceeding a hundred years. Though it has been clearly shown that the cases of Jenkins, Parr, and others, rest on no proper evidence, and are quite inadmissible as proofs of excessive longevity, yet Sir George appears to have rushed into fanciful conclusion in arbitrarily limiting it to one hundred years: the fascination of numbers has had some share in this. There are well

authenticated cases of persons who have exceeded the age of one hundred years, attested by the registration at baptism, which is what the opponents of man's possibly exceeding thirty-six thousand five hundred and odd days of existence have always demanded. There is the case of Miss Baillie, sister of Dr. Baillie, of Mr. Shulldham of Marlesford Hall, who took the chair at a dinner given to his tenants on his one hundredth birthday, and lived two years subsequently. Of this case, my friend, Mr. Cordy Jeaffreson, has been good enough to give me the following sketch:

"The old man lived at Marlesford—not at Martlesham—famous in history for its Red Lion; and he certainly was not more than one hundred and two years at the time of his death.

Baptized at Beccles, in Suffolk, in July, 1743, William Shulldham died in May, 1845. The exact date of his birth I do not know, but I presume that it preceded his baptism long enough to entitle him to be credited with having lived into his one hundred and third year, the age which he is represented in obituary notices to have attained. That the above-mentioned were the dates of his baptism and death, you may be confident. The celebration of the completion of his one hundredth year took place on July 22, 1843, when a great gathering of the gentry and humble folk of the neighborhood feasted at Marlesford Hall, and had sports in the park. If that celebration took place on the actual anniversary of his birth, he was some two months under one hundred and two at his death. So that your statement may be unsatisfactory, you had better speak only of the dates of his baptism and death, unless you make inquiries at Beccles.

William Shulldham's circumstances and habits of life were favorable to health. An energetic but not overworked man, he drove a capital business as a country attorney, at Wickham Market and Saxmundham. A lover of country sports, he had for the greater part of his life a house in the country, first at Carlton Cross, a mile out of Saxmundham; and secondly, at Marlesford, where he built a handsome hall, which, together with its small but picturesque park, may be commended as one of the best country places in the neighborhood of Wickham Market. He retained his faculties up to his last illness, which did not cover more than a week or so, writing letters with a firm, clear hand, and managing his affairs until the last days of existence. Every successive decade of his career saw him a wealthier man. He never knew serious care: was active, and of what in

his day of universal drunkenness was deemed temperate habits.

By referring to Davy's 'Suffolk Collections,' pedigree 'Shulldham' (British Museum), you may ascertain that the Shulldhams were, upon the whole, given to longevity. The centenarian's grandfather completed his eighty-sixth year. The said centenarian married early in life my father's first-cousin, Mary Barber, of Boyton, who survived her husband and died considerably more than ninety years old; and the vigorous constitution and tenacity of life of these long-lived parents were transmitted in some degree to two of their offspring. The centenarian had by Mary Barber four children, William Abraham Shulldham, who lived to see his seventy-fourth year, though he suffered from epilepsy more violently than any other epileptic patient I have ever known; his fits were frequent and inordinately violent, but did not kill him till he was seventy-three; Lemuel, killed at the battle of Waterloo; Frances Mary, a married woman, who died at forty-two, after giving birth to several children; and Louisa, a spinster, who was born December 23, 1791, and still lives, a very vigorous woman for one of her years."

I am also indebted to Mr. Cordy Jeaffreson for a notice of the case of the father of the Rev. Thomas Hart Davies, Chaplain at the Dockyard, Portsmouth, in 1800. This gentleman died at the *supposed* age of one hundred and sixteen, but his age was afterward investigated and found to be only one hundred and nine.

Sir Henry Holland informs me that last summer he breakfasted on the St. Lawrence, in America, with a British officer, whose commission proved him to be one hundred and four years of age. Sir Henry also has evidence of a case in which the age of one hundred and eleven years was reached.

On *à priori* grounds we have seen no reason to believe that man should not have a higher longevity than one hundred years as a monstrous and abnormal phenomenon, and on this consideration we may not be indisposed to accept statements as to ages as great as one hundred and ten, or even one hundred and twenty years being attained, even though such an occurrence were not absolutely demonstrated and proved.

The expenditure in implied *distinction*, and the generative expenditure implied in twenty-two children, the offspring of a lady who certainly was alive in her one hundredth year, can not be held to militate against the general law. These are isolated cases, where unusual vigor (*i. e.* abundant "matter of life") has increased lon-

gevity and the other quantities simultaneously. There is not a sufficient number of trustworthy records of cases of high longevity to make an extended testing by them of the conclusions arrived at as to causes favoring longevity, likely to be of any real value.

In the course of what has been written, the exceedingly involved nature of the inquiry, and the absence of all but the fewest data as to comparative longevity, have been made sufficiently apparent. It is to this condition of the subject that we would gladly direct attention, as the

cause of indefinite and speculative character in an essay treating of it. It is hoped that in indicating possible lines of productive inquiry and in pointing to the more prominent and remediable gaps in information, some more practical result has been attained.

It would have been possible no doubt to carry mere speculation into greater detail than has been attempted, as to the influences affecting longevity in man, but the facts, such as they are, seem fairly to admit of no more positive inferences than have been given.

Down in the Heart.

BY LYDIA M. MILLARD.

DOWN in the heart glows many a gem,
That never is seen by eyes of men;
Yet shines most pure, in its cell so deep,
Where angels holy their bright watch keep.

In vase of the heart blooms many a flower,
Exhaling its sweets each bitter hour;
It has dew and sun and skies of its own,
That flower in the heart so fair and lone.

There's many a star in the heart's pure sky,
Unseen and unwatched by the careless eye;
Yet brighter it grows, till radiant gleams
That star in the heart with celestial beams.

Above Ambition's highest flight,
Beyond the stars serene and bright,
Dazzling Shekinah, radiant light,
Rests on the lone soul's cloudless night.

In each clay casket, frail and plain,
No human heart shall beat in vain;
Divine Appraiser, in the dark,
Carves on each soul His private mark.

Nor flower, nor gem, nor star of soul
May leave a trace on mortal scroll;
Vailed flower, lone star, and hidden gems
Shall grace Valhalla's diadema.

THEORIES PUT IN PRACTICE; Or, Extracts from the Diary of a Physician's Wife.

EDITED BY MRS. H. C. BIRDSALL.

THURSDAY, June 14.

LENA Willis has left us to-day, and I miss her very much. In many characters the social element is so well developed as to require no cultivation; but others are so constituted that they need little society, and consequently fall into the habit of withdrawing too much to themselves, and I am one of these. To such persons companionship is a necessary good. I often wish that society was constituted differently. In country places we are getting more settled in the habit of visiting only upon invitation. We do not feel at liberty to go when and where we please, for we might inconvenience the one whom we wish to visit. At the last meeting of the Mutual Improvement Society, I proposed this subject for consideration, and yesterday it was discussed. Some of the ladies maintained that they never make any formality of inviting guests, that they receive and entertain them as simply as if they came unexpectedly. This is as it should be, but I know that it is not the usual custom. Elaborate preparation is the common consequence of formal invitation, and such preparation is formidable, alike from its trouble and expense. It was generally agreed that informal visits are the most agreeable, and we all promised to do what we can to break down the custom of *parties*, and to build up that of freer and more natural intercourse in our own small sphere. The old and oft-repeated simile of a stone dropped in the water recurs to me—but it is one of those comparisons which will bear repeating. Indeed the repetition of any good thing is endurable, if we only remember that every thing is new at some time to some one.

The analogy is complete in this simile, for every one has noticed how circle follows circle in the water, after the dropping in of a stone, ever enlarging and extending, and, in a similar manner, how example repeats itself in ceaseless circles until it is beyond our notice.

Friday, June 15.—We visited this afternoon at Aunt Minerva's for the first time. Deacon Brown has a widowed daughter-in-law living with him, so sick with consumption that she needs the tenderest care and sympathy. Aunt Minerva seems to disapprove of her delicate

state. I hope that I do Aunt Minerva injustice, but I can not escape the conviction that she looks upon weakness and sickness as almost sins. Mrs. Smith does not look as if she were either physically or morally able to resist the ponderous pressure of such character as Aunt Minerva's. If I can become sufficiently acquainted to allow it, I will give Mrs. Smith a little sympathetic counsel which may be of use to her.

Sunday, June 17.—I snatch a few minutes from company for my journal. Mr. and Mrs. Tyndall arrived last evening with their two daughters to spend a few days. They are old friends of Henry. I found in the morning that none of the ladies cared to go to church, and, at first, I had doubts as to my own course.

In ordinary matters the laws of etiquette should be observed by us; but it seems to me that they should not be consulted in a case like this. Taking Henry aside, I held a short consultation with him, in which we agreed that I had better waive all rules and do that which seemed to me best. I therefore went to church, and left all the ladies at home.

Mr. Tyndall went with us, and expressed himself as much pleased with the service and sermon, to the former of which he is unaccustomed. They are very interesting people, refined, cultivated, and kindly, but their influences and surroundings have been such that they have no particular religious bias.

Monday, June 18.—This morning Mr. Tyndall went with Henry on his professional round, and Mrs. Tyndall and her daughters rode with me to the top of Eldon Hill, from which we have such a charming prospect. We went up through the Middle Gorge which abounds in scenes picturesque enough to satisfy an artist's eye. My favorite one is at the entrance of the gorge, where there is an old saw-mill with an artistically deserted, ruined air, and a lovely mill-stream which trickles its way over the roughest and prettiest of beds. The ladies were delighted with this view, and it recalled to them various foreign scenes, which were brought before me with that freshness and vividness which is seldom a characteristic of written descriptions of travel.

When I was recalled homeward by the time, it was almost with feelings of regret that I came down to the prosaic getting of a dinner for hungry mortals; but this feeling I quickly routed, and three hours afterward took genuine pleasure in setting before my guests a dinner of which I was not ashamed.

Tuesday, June 19.—I find upon further acquaintance with Mrs. Tyndall, that she is a practical, and, although so intellectual and highly cultivated, does not despise a knowledge of the smaller needs of life. She gave me an amusing description of one of her acquaintances this morning. She is an intelligent person, and holds herself entirely aloof from a knowledge of those things which it is, in almost all cases, necessary to know at some time of life. Not long since this lady, for the first time, was left entirely without help. She contrived to prepare something for her husband and children to eat, as long as her supply of dishes lasted, and then, what did she do? The natural answer would be—she washed the dishes and commenced again—but no—she sat her down and wept! The relation of this incident naturally led us to the inevitable servant question. Mrs. Tyndall agreed with me that much of the demoralization of servants may be attributed to the so general departure from our former simple state of living. Hundreds of families are suffering to-day the evil consequences of aping the customs of a state of society which was not a suitable model for us. The thousands of people who were made rich by our late war, were mainly of that class who believe the essentials of position to be money, houses, land, carriages, and servants. Many of them are groaning to-day at the sight of their households cared for in the most inefficient manner, by from three to six servants, and think with mournful longing of the days when their work was well done by one. If they were alone affected by this evil, it would not be so bad; but the truth is that they have brought a curse upon all the households of the land. We can not foresee the result, but think there will be little restoration to comfort, until we, as a people, return to that republican simplicity which was once, and, we trust, may be again the glory of our land. Mrs. Tyndall has an establishment of three servants, and, so far, has had little trouble with them; she holds herself in readiness, however, for disturbance of the domestic peace, and says that her first step will be to diminish her number of servants to one, or, if necessary, to none. She feels herself and daughters to be perfectly independent. She

told me an instance of love of system in one of her servants, which sounded very funny in the recital, but must have been as annoying at the time of its occurrence. Mr. Tyndall had been kept up very late for several nights by press of business, until he was so completely worn-out that he spent one day at home to recruit. He went to his room in the forenoon hoping to sleep off some of his excessive fatigue. He was soon asleep and dreaming of being shrouded and his face covered for burial; he even heard the carriages rolling and rumbling along the streets, and felt the rattling and jolting of the wheels. Awakening to consciousness, he found a sheet over his face; throwing it off, he discovered the cause of his dream. The chambermaid, rather than depart from the systematic routine of her work, had covered him from the dust and had treated him to a ride round the room that she might sweep under the bed. His state of mind is imaginable—he jumped up, rushed down to the parlor, darkened the windows, and again addressed himself to sleep. This time he was aroused by a glare of light, and he found that his enemies, the chambermaid and broom, had followed him. He then made war upon them with a volley of words, which had the effect of gaining for him a quiet and undisturbed hour.

Saturday, June 23.—The Tyndalls have been Dr. and Mrs. Hutton spent last evening with us. I had asked Mrs. Hutton to bring some of her delightful foreign stereoscopic views; and as we looked at them, I had a rich feast. The pictures are exquisite in themselves, and illustrated by the stories and descriptions of such people as these friends, they become living realities. What a dismal feeling of loneliness attacks one when she is first left alone by the departure of visitors! I must do something to occupy me until this feeling passes away.

Evening.—Henry told me this afternoon of a sick family whom he thought in need of that delicate cookery so acceptable to the convalescing invalid. So I spent two or three hours in preparing delicacies for them. I at the same time made a bowl of custard for one of Madge's friends who has been very sick, and is now getting well. Madge was quite troubled at my taking as much pains with the latter as the former—she seemed to think it necessary to make a difference in the preparation of food for rich and poor.

Madge is very fond of assistance in her labor. While her work was made harder by the presence of company, she impressed all the little boys who came to the house for milk into

service, rewarding them with such odds and ends as are dear to boys' hearts. She makes one corner of the table-drawer a depository for trinkets, bits of leather, pins, etc., etc. If she has any candy, nuts, or fruit given her, they find their way to her store, and are all saved for her assistants.

Her morning salutation to them is, "Now ere's the byes for me; jist fetch the poor owld maid a pail of wather, and shure, I'll do as much for ye. Here, byes, byes, to wurk, ivry callywag av ye—no lazy byes in this house—ivry one has to wurk—run and fetch me some food, an' I'll remimber ye with the first money finds in the ashes." Her Michael was received ungraciously by her when he made his usual visit on Sunday last. The cats spent a happy and peaceful afternoon, but poor Michael had no rest. Madge attacked him in this wise, "An' what are ye comin' here for once a week; faith, 't' ain't there enough av gurrils that wud like to be the face av ye, widout yer showin' it where 's not wanted? An' ye need be comin' no more. I know about ye. Waan't Bridget Higgins a callin' me but a week ago that she had seen ye in the owld country, an' that ye left a wife an' three childers afther ye?"

This was too much for even Irish humanity, and Michael ran wildly from the house with Madge in close pursuit. He yielded to the persuasive influence of her coaxing tongue, and returned to talk over the matter in a calmer way. This evening Michael has come to tell Madge, that, on his way home on Sunday, he met the offending Bridget and accused her of falsifying about him.

She at once retracted, saying that she had never said a word, and never laid eyes upon his face until she saw him three weeks before at Mrs. Malone's party." He then wrote to some friends in New York for evidence as to his character; this was immediately given, and he came to-night with a very satisfactory letter which I was privileged to read. Madge was gracious for half an hour, and then ordered Michael off, telling him that "she did not wish to marry any one, that she had enough to do to take care of herself, that she had a good home, and no notion of lavin' it for the likes o' him."

Of course he departed in anger, but I think there is little doubt that he will be seen again on Sunday. The Irish will continue to afford amusement as long as there are any of the natives left. I imagine that, in the course of years, they will lose something of their national peculiarities by contact with American character and influences.

Monday, June 25.—What interesting and amusing characters we find in our daily walk, if we only keep our mental vision clear! I have gradually become acquainted with the sexton of our church, and find him very entertaining. He is extremely observant, and looks with utter contempt upon what he considers the follies of the present day. A limited number of furbelows and flounces worn by a person whom he likes are overlooked, but let the same number appear upon some young girl who has offended him by her giddy ways, and his disapproval is intense. He is short of stature, and walks with an air of determination to get on rapidly, but is prevented in carrying out his intentions by the shortness of his legs. It is painfully amusing to see an unlucky dog venture into the church during service, for Mr. Nelson has but one way of ejecting them, a method which effectually interferes with one's devotional feeling. He follows a dog up or down the aisle with his brisk, decided walk, until he gets within exact kicking distance, and then kicks. The suffering dog vanishes through the door with a yelp of pain, and the sexton resumes his seat with the air of a man who has added another link to his chain of well-performed duties. One always wishes that this time the dog may escape him, but this may not be, for he is as inexorable as Victor Hugo's Javert, and long practice has made him perfect in his aim. He is very fond of music, and for a man of his limited cultivation, has excellent taste. Yesterday morning I went to church early, that I might enjoy a little time in playing upon the organ. I did not find my usual small boy, and Mr. Nelson kindly offered to blow the organ for me. Discovering him to be just in the humor for talking, I encouraged it for the sake of hearing some of his views. He fell upon a very common topic with him, the follies of the present race of young ladies. "Why, Miss Sanbo'n, it do seem to me sometimes as if ev'ry thin' was different from the time when I was young. For my part I don't see what's to become of the gals and boys, most specially the gals, for they's the wust. A runnin' the streets from mornin' till night, their heads full of nothin' but dress and airs. That ain't the way I brought up my gals—none of 'em could go a flouncin' round as the gals do now. There's Jessie Lane, now—*she* knows how to behave herself, and Mary Hutton, too—you never see them wrigglin' and twistin' along as so many of the gals do, for all the world like so many eels with clothes onto 'em. I wonder sometimes how they manage to keep their clothes fastened to 'em. Now folks finds fault with me, 'cause I

don't come to Communion, but, bless me, I can't kneel down and say that I'm an unworthy, miserable sinner, and hear them gale all around me sayin' the same words and not meanin' on 'em. Up they gets from their knees, jist as vain as ever, and seems to think nothin' more about their bein' sinners until the next time they comes to church."

Here was the same jumble of notions of right and wrong which is so common in people of far more intelligence and culture than Mr. Nelson. It may be found in almost all minds in different degrees. Many thoughts crowded upon me, some on the sexton's side, for he was partially right—there is too much vanity and show and

trifling in the world; but some also for the other side, for young people must have their time of being young and joyful and merry, and under the lightest exterior there may be a germ which shall ripen in time into great beauty and worth of character.

Mr. Nelson was at least wrong in taking the actions of others as an excuse for his own dereliction in duty. I did not endeavor, however, to argue with him, for Henry had previously told me that an immense amount of argument has been lavished upon him, and apparently he only grows more confirmed in his opinions as he advances in age.

STUDIES IN HYGIENE.

QUERIES IN HYGIENE WITH ANSWERS.

—1. What is the method by which a disinfectant produces its results?

ANSWER.—The best disinfectants are those which entirely destroy the substances upon which they act, by changing them chemically. This is what carbolic acid does.

2. What is meant by the "germ theory" of disease?

ANS.—It is the belief that certain diseases, as small-pox, cholera, measles, etc., etc., are simply crops produced by certain germs or seeds spread by the air, or by contact, and taken into the blood, where they are propagated and produce their results. This theory, while not yet proved, is quite likely to be proved, and is entertained by many of the most able scientists of the age. These germs produce in the blood real plants of a fungus character, which are revealed by the microscope. Losch, a Russian microscopist, has, he asserts, recently found in the excrement of cholera patients, which he studied immediately after its passage, monads in great numbers, with body and tail and power of motion. In a drop the size of the head of a pin, hundreds were counted. Vegetable parasites were also found. These go through their period of growth and

produce germs, by which the disease is propagated under favorable circumstances. If the excrement is properly disinfected, these productions, or the germs, are destroyed, and thus the spread of disease prevented. The great value of a disinfectant is in its power to kill the germs before mischief occurs.

3. Is the human race deteriorating physically, or improving?

ANS.—There is no doubt but, as a whole, the race is improving, though individuals, families, and even nations, may be deteriorating and running out. Who does not know of at least one family that was once strong and powerful, but is now almost extinct. Dr. Beddoe read a paper on this subject, as applied to the British people, recently, in which he took the ground that probably a majority of that nation were deteriorating. Such a multitude are overworked and underfed, that it is no wonder they deteriorate.

4. Is it wise to let young children have a day to play with?

ANS.—Very often it is. The playfulness of this animal, if young and healthy, cultivates a playful spirit in a child that may otherwise be puny, and this aids greatly in its physical de-

development. In choosing a dog for a child, select one that is young, active, healthy, and with a good disposition. Keep him clean, and feed him on wholesome food, and give him plenty of pure water to drink.

5. Is a hearty meal in the middle of the day a good thing for a literary person who expects to write in the afternoon?

Ans.—No. The dinner should be light, or delayed till the work is done. Intense brain work should not go on at the same time that the stomach is strongly taxed in digesting food.

6. Do you think the old saying, that "every man must eat a peck of dirt" is true?

Ans.—Probably it is, especially for those whose habits are filthy. The Food Journal says that in many families "stewpans and other utensils are put away dirty, cloths are used in a dirty state, pastry is made on dirty boards with dirty hands, and various other unclean enormities are practiced; in fact, dirty ways are too often indulged in, until they grow into dirty habits. People who possess a cook at all inclined to laziness will discover that the failing is invariably accompanied by dirtiness. Each member of such a family will rapidly consume a regulation peck of dirt; while the quantity for an average life-time would have to be calculated by bushels!"

7. What are baking powders made of, and are they proper things to be introduced into the stomach?

Ans.—The modern baking powders, as a rule, consist of tartaric acid and carbonate of soda, which evolve the necessary gas when in contact with water to make the bread light, leaving behind a residue of tartrate of soda. In practice they are made by mixing together these two substances (first thoroughly dried and pounded) in nearly equal proportion, and then diluting the mixture thus made with any cheap material, such as flour of rice, so as to add to the bulk, and enable an apparently greater quantity of baking powder to be sold for a given sum. Many excellent food authorities have objected to the use of baking powders thus made, on the

ground that it behooves us to be careful how we add to the already sufficiently large amount of mineral matter which we naturally consume daily. We should hesitate before we advised the whole bread of a family to be thus prepared, though for some of the minor articles of food only occasionally used, they may do little harm. Unfortunately some of the manufacturers of baking powders are guilty of the addition of alum in considerable quantities.

8. Is there any philosophical objection to cutting off the beard close to the skin with a razor every day?

Ans.—We will let Dr. John Brown, an eminent English divine and author of "Spare Hours," and "Rob and his Friends," reply to this query:

"I am for beards, out and out, because I think the Maker of the beard was and is. This is reason enough; but there are many others. The misery of shaving, its expense, its consumption of time; a very corporation existing for no other purpose than to shave mankind. Campbell the poet—who had always a bad razor, I suppose, and was late of rising—said the man of civilization who lived to be sixty had suffered more pain, in littles every day in shaving, than a woman with a large family of children in bearing them. This would be hard to prove; but it is a process that never gets pleasanter by practice: and then the waste of time and temper—the ugliness of being ill or unshaven. Now, we can easily see advantages in it. The masculine gender is intended to be more out of doors, and more in all weathers, than the smooth-chinned ones; and this protects him and his Adam's apple from harm. It acts as the best of all respirators to the mason and the east wind. Besides, it is a glory; and it must be delightful to have and to stroke a natural beard—not one like bean-stalks or bottle-brush, but such a beard as Abraham's or Abd-el-Kader's. It is the beginning ever to cut that makes all the difference. I hazard a theory, that no hair of the head or beard should ever be cut, or needs it, any more than the eyebrows or eyelashes. The finest head of hair I know is one which

was never cut. It is not too long; it is soft and thick. The secret where to stop growing is in the end of the native untouched hair. If you cut it off, the poor hair does not know when to stop; and if our eyebrows were so cut, they might be made to hang over our eyes, and be wrought into a veil. Besides, think of the waste of the substance of the body in hewing away so much hair every morning, and encouraging an endless rotation of crops! And as for woman's hair—don't plaster it with scented and sour grease, or with any other grease; it has an oil of its own. And don't tie up your hair tight, and make it like a cap of iron over your skull. And why are your ears covered? You hear all the worse, and they are not the cleaner. Besides, the ear is beautiful in itself, and plays its own part in the concert of the features. Go back to the curls, some of you, and try in every thing to dress as it becomes you. Why shouldn't we, even in dress, be more ourselves than somebody or any body else?

TOBACCO STATISTICS.

9. Can you give me any statistics as to the amount of tobacco used in Great Britain during a single year? I am to discuss the Tobacco Question soon in a public lecture, and wish for some additional facts.

Ans.—Thomas Reynolds sends to *The Food Journal* the following which may serve your purpose:

"The duty on the imported tobacco leaf, in 1870, yielded to the British Government £8,543,000; 548 manufacturers were engaged in preparing it for the market, and 280,000 retailers are wholly or partially supported by the sale of the commodity in its various forms. We are accustomed to speak of the cost of tobacco by the time it gets into the hands of its customers, with appendages for its employment, including all sorts of pipes, snuff-boxes, and the general paraphernalia, as equal to the amount of duty, which together would be something more than £18,000,000; but Dr. Murray's figures lead to some calculations which are calculated to excite consternation. If, for example, each of the

268,000 retailers of tobacco were annually supplied with only £20 worth, exclusive of duty, the manufacturers would have to prepare for the markets £5,360,000 worth; and if the average profits of the retailers were £20 per annum, that would be another £5,360,000. Neither foreign cigars, nor appendages for the employment of tobacco, are included in these statistics, nor is it possible to conjecture, within some hundreds of thousands of pounds, what the expense of these would be, but another million pounds may be safely added; therefore, the foregoing items would stand thus:

One year's supply of tobacco...	£5,360,000
One year's profits to retailers...	5,360,000
Foreign cigars, pipes, etc.....	1,000,000
One year's duty.....	6,548,000
	<u>£18,268,000</u>

These statistics are enough to turn an individual pale, but what ought their effect to be on the minds of our countrymen and countrywomen when they view them in relation to Him to whom we are accountable for the employment of our time, our talents, and resources?

LIFE INSURANCE.

10. Is it wise for a young man who needs all his earnings to invest in business, or in education, to have his life insured, and be annoyed every year in making payments?

Ans.—We value life insurance highly, but we advise none to go into it without proper knowledge of what it is and what are the expenses and drawbacks. It has proved a blessing to multitudes, still no kind of life insurance is as good as a good constitution—which we advise all our readers to get and keep if they can—by a temperate, wholesome, well-ordered life. The kind of life insurance in which Mr. Bryant and William Howitt invested, as given in their admirable letters written for *THE HERALD OF HEALTH*, and published in May and August of this year, is worth more than any policy in any company, however valuable the latter may be. While on this subject, we may say that we have a friend who thinks his life was once saved by a policy for \$10,000. It happened in this way:

He was very ill, and it was thought he would die, but he felt so easy in his mind because his family were provided for by this \$10,000 that it aided in his recovery, and he still lives. Thomas K. Beecher relates a similar case, as coming under his observation.

11. What shall I do with my boys? I have two, one seven and one nine years old. I live in a city and can not teach them gardening or out-of-door work. I wish to bring them up not only to know how to read and write, but to labor, and I have no work for them to do. Can you suggest any course I can pursue, in *THE HERALD OF HEALTH*?

Ans.—Your condition is like that of thousands in all large cities, except that you have one advantage: you recognize the situation as one requiring attention, whereas thousands of parents let their children go without thought, and they often go to ruin. In the first place, do you not know that you can have your children help you in various ways by attending to the little details of labor required in every family. First, teach them to help you. Next to this, you should give them a chance to develop their mechanical genius; get tools for them, and get a teacher to show them how to use the hammer, saw, plane, if you can not do it yourself. The Scientific American on this point is excellent; it says:

"Our advice is, to all who have the great responsibility of the charge of boys: give them a lathe, or a set of carpenter's, or even blacksmith's tools. Give their minds a turn toward the solid and useful side of life. You will soon see the result in increased activity of their thinking capabilities, and the direction of their ideas toward practical results; and, still more obviously, in the avoidance of idle mischief and nonsense (to omit all reference to absolute wickedness and moral degradation), which are, to too great an extent, the pastime of the generation which is to succeed us. The future of the world is already sown, and is springing up in our children; is it not worth while to bestow a little thought on the cultivation of a growth so important to society, and so easily influenced for good or for evil?"

Above all, remember your responsibility to your children, not only to give them a good school and physical education, but to teach them to be industrious, which is more important than any book knowledge. Many well-educated people commit crimes, but few industrious ones do. They have no time to get into scrapes, and are rarely found in our jails, or on our gallows.

12. What makes people differ so in the amount of work they can do, or in their power to resist disease?

Ans.—What makes one river larger than another, or one ocean greater than all other oceans? Why, because some rivers and oceans contain more water than others do. And the reason why some people can do more work than others, or resist disease longer, is because they contain more energy. They have better stomachs and can digest more food; or larger lungs, and can use more air; or better muscles, and can perform greater herculean feats; or better nervous systems, and more wisdom, and can guide and use their bodies to better advantage. "The longer I live," says one of earth's noblest sons, "the more I am certain that the great difference between men, between the feeble and the powerful, the great and insignificant, is *energy*—invincible determination, a purpose once fixed, and death or victory!" That quality will do any thing that can be done in this world; and no talents, no circumstances, no opportunities will be worth much without it.

13. If a man commits suicide and his life is insured, can his heirs collect the insurance?

Ans.—Yes, unless it is proved that the suicide was committed to defraud the company. If the suicide was the result of disease, as it generally is, the case stands the same as if it had been fever or small-pox.

PROFANITY never did any man the least good. No man is richer, or happier, or wiser for it. It commends no one to any society. It is disgusting to the refined, abominable to the good, insulting to those with whom we associate, degrading to the mind, unprofitable, needless and injurious to society.

OUR DESSERT TABLE.

APPROPRIATE CONTRIBUTIONS FOR THIS DEPARTMENT SOLICITED.

A RESTAURANT keeper who has a warm side for the unfortunate, encountered a few weeks since, a young man in search of work. He had failed to find any thing to do, though he had been trying to get employment for a week. He had no friends in the city, and what was still worse, no money. He had not been able to procure any dinner, having spent his last shilling for his breakfast. "Come into my establishment," said the kind-hearted proprietor, "and get your meals here without charge until you can earn some money. I can't see a man starve." The young man was profuse in his demonstrations of gratitude, and made his appearance at meal-time for several days with great regularity. One day he brought a fellow with him. They ordered and ate a costly dinner, and were about to retire, when a waiter, placing a check for one dinner on the table before them, was called back to explain; not being able to account for the charge, the proprietor was summoned, and reminded of his kind promise to furnish meals until his protegee could find work. "Certainly, that is all right," said he; "but who is to pay for this gentleman?"

"He is my friend," explained the indigent young man; "he came here on my invitation."

"I hope he will not come again on such terms," remarked the irate proprietor.

"Very well," said the spirited recipient of his bounty, rising from the table with an injured air, "you may count me out then. I never accept favors that I can't share with my friends."

A FIREMAN in Pennsylvania, went into a barber-shop to get shaved, and finding the barber out, he concluded to have a little fun before his return. So he took off his coat, put on a thinner one, and quietly waited for a customer. An old gentleman came in soon. "Have a shave, sir?" said our impromptu barber. The old gentleman took a chair, and our artist began to lather, expecting every moment the barber would appear. Five minutes passed and no barber. Ten minutes; no barber. Now the old gentleman felt pretty well lathered. Five minutes more; no barber. The old gentleman's face fast disappearing in a small sea of white foam. Five minutes more. Still no barber. The fireman is getting desperate, and conceives a bright idea. Putting up his brush, he quickly changes his coat again, takes his hat, and is about to quietly slip out behind the gentleman's back, when he turns his head and exclaims: "Here, sir, ain't you going to shave me?" "No, sir," promptly replies our sloping friend; "the fact is, we only lather here, sir; they shave four doors below!"

JUDGE L—, of Lafayette, Ind., not only dispenseth justice with even hand, but at times indulgeth in the jocose: During the progress of a certain trial involving the ownership of a calf, it became of importance that the jury, in order to arrive at a just conclusion, should be sent out to view for themselves the chattel in dispute. The plaintiff, who had possession of the animal, lived some two miles from the court-house, and one of the elderly jurymen demurred to the idea of being sent so far. The judge, in his usual round, full voice, replied: "Gentlemen, I anticipated this objection,

and had the calf brought to the court-yard. I thought it less trouble to bring in one calf than to send out twelve."

The jury emerged into the open air, and, in presence of the calf, deliberated.

A NEGRO who is fond of writing his name in very conspicuous places, was told by a German fellow-citizen, that he did not spell it correctly. "'Thomas', not 'Tomes'," said his informant, "is the right way to spell your name." "I understand all that," said the darkey, "but you ought to know the man's name in his own language is very unregular, an' der is more dan one right way to spell a man's name in dis country."

THERE is a man in Glen's Falls, N. Y., who won't believe any stories about the sagacity of dogs. He says that dogs have not common sense. In proof of his assertion, he relates how he poured kerosene on a dog and set it on fire just to have a little fun. That dog actually run under the barn belonging to him and lay there and set the barn on fire, though the man whistled to him to come out!

THE Davenport (Iowa) Gazette says: "It is currently reported that Governor Merrill, on a recent visit to the State Penitentiary, commenced a speech to the prisoners by remarking that he 'was glad to see so many there!' This was followed by no applause—on the contrary, by an awkward pause—and then the Governor took back what he said, with what grace he could muster."

An eccentric minister in a large parish had seventeen couples to marry at once in a grand common service at church. In the course of the wedding he asked one of the men to pledge himself to the young woman. The man naturally protested, but was told: "Hold your tongue! I will marry you all now and here you can sort yourselves going home."

An ingenious wife in Des Moines cured her husband of snoring thus: She has a rubber percha tube with cup-shaped ends; one she puts over her nose and mouth, and the other over his ear. He assumes his own noise, as a stove does its smoke, and wakes up instantly.

A CRAZY man having got into the gallery of the Senate of the United States during a rambling debate, was taken out, the sergeant-at-arms telling him that he was "out of place in that gallery." "That's said the lunatic; 'I ought to be on the floor with the Senators.'"

A DOCTOR in a Western State was arrested and tried because his patient died, as all must sometime. The jury showed their knowledge of medicine by acquitting him, because he had given the patient of the medicine he knew any thing about.

A WIFE'S TEXT: "The right man in the right place"—a good husband at home in the evening.

WHY was Eve not afraid of the measles? Because she'd Adam.

EDITORIAL DEPARTMENT.



NEW YORK, DECEMBER, 1871.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

THE PUBLISHERS do not hold themselves as indebted for every article which may appear in THE HERALD. They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.

Exchanges are at liberty to copy from this magazine giving due credit to THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D., EDITOR.

A GLANCE BACKWARD AND FORWARD.—

When a piece of work is completed, we all like to look over it and see how it compares with the ideal that was projected before the work was begun. From this point of view, let us take a look at THE HERALD OF HEALTH, now complete for 1871. In the first place, we have reached each reader since January last, leaving out the advertisements, about seven hundred pages; or, if printed in ordinary book type and bound in a matter enough to make seven or eight far-and-a-half books. But the amount of matter is of very little consequence as compared with the quality and real value, so let us look at these things. We pride ourselves not a little in hav-

ing given, during the year, thirteen, and, since November, 1870, fifteen of the most valuable articles on Temperance that have for many years, if ever, issued from any American press. Being mostly by different writers, the question in all its aspects has been touched upon, and, as we happen to know, to good purpose.

The series of articles by Rev. C. H. Brigham, extending as they have through every number of the year, have been most excellent, and have received from the press the highest praise. On the subject of Longevity there has been so much loose, flimsy teaching that we determined to do something toward correcting it. The prize essay by E. Ray Lankester, B. A., one of the best of the English writers on science, which is completed with this number, has, we hope, done something in this direction. This essay contains the latest thoughts on the subject, and the kernel to some of the most important hygienic hints yet given to the world.

We take a little pride in having secured from Mr. William C. Bryant his remarkable letter published in our May number. That it was an important letter is known from the fact that it has been copied far and wide from our columns, and been read by millions of persons; also, letters from Father Cleveland, William Howitt, Mrs. Horace Mann, and P. T. Barnum, giving their experience on important questions relating to habits of life.

This cursory view gives an idea of a few of the important features of our monthly for the year, leaving out of view a very large list of articles by leading thinkers on Health and other topics, such as "Studies in Hygiene," "Topics of the Month," "How to Treat the Sick," "Answers to Correspondents," Poetry, the admirable papers of Mrs. Birdsell on "Theory vs. Practice," three articles by Mrs. Gleason on "The Education of Our Girls," etc. etc.

Our Index printed with this number will show

a very large list of topics, to which we refer the reader.

Now let us take a glance ahead, though we have so many good things in store that we can not enumerate all of them. To begin with, we shall print during the coming year a series of Lessons for Children, on the care of their bodies, their stomachs, their hearts, muscles, skin, eyes, ears, etc. They will be simple, practical, and free, and be great helps to parents in giving their children valuable lessons which will save them much pain and suffering and ill health in after life. These lessons will be prepared by the Editor, and be an entirely new feature of Health literature. Let us see if something more can not be done for the little ones by this means.

Rev. C. H. Brigham has sent us a list of topics for articles for the next volume, among which we may name the following: Body and Mind, Money-Getting, Money-Spending, The Farm and Farm Life, The Work-shop, The Study.

In another place will be found a letter headed "An Open Question, Answers Solicited." The opinions of a large number of prominent writers, medical men and women, will be printed in 1872, in answer to this and similar queries.

The January number of THE HERALD will contain a most excellent article on the Care of Children, by Dr. Clemence Lozier, Dean of the New York Medical College for Women.

Still another feature will be the appearance of a discussion of the question of "Hereditary Genius, and an Inquiry into its Laws and Consequences," by Francis Galton, F. R. S. This work is by an eminent English writer, and the facts elicited are of the highest interest to all who value the improvement of the race.

Our "Studies in Hygiene" will be made still more valuable during 1872. All of our readers are invited to furnish questions to be answered in this department. A page or two each month will be devoted to the cultivation of mirth.

We shall resume the publication of our contributions by Rev. Henry Ward Beecher, and hope also to secure a number of papers from

Thomas K. Beecher, whose instructive discourse on the great Chicago disaster is found in this number. We shall also continue the feature of letters similar to those by Bryant, Howitt, Barnum; only some of them will be by women, and they will embrace a great variety of topics. These are a few of the good things in store. We may add, that what we have indicated comprises but a small part of what we shall give. We shall try to make this monthly a helper in every family, and especially add to its value to mothers. With the beginning of the year we shall bring new topics up for discussion, and thus avoid what is found in every paper and magazine, monotony. Thus our readers will see we have a grand programme for 1872. We hope to see every one of them with us again early. We can not spare a single name. And we desire that all bring at least one friend, and better if a hundred. Thus all will help to improve the race, and make the world better for having lived in it. No cause is so much in need of laborers as the Health Reform. So long as half the children die before four years old, and few live in health and comfort to old age, so long must we labor with courage. While invalidism stares so many in the face, we can not lay our armor down.

And now, before closing, we wish to say that THE HERALD OF HEALTH will be published for 1872 at the reduced price of \$1.25 per annum, or five copies or over at \$1.00 each, without premium. Those who wish for premiums will, as heretofore, pay \$2.00. The object of this reduction is to double our subscription list. Will not each present subscriber send at least one new name?

With best wishes and a healthy, happy year to come, we now say Good-by!

SPECIAL NOTICE.—Those of our subscribers who wish to secure the volume from the beginning of the year should send in their names promptly, as our list promises to be very large next year, and we can not promise to supply back numbers very long. Subscriptions should be sent at once.

AN OPEN QUESTION—ANSWERS SOLICITED.

The following letter was suggested by the statement in the October HERALD OF HEALTH, age 169, from Lankester, to the effect that the chances for a girl to live to old age are always little better than a boy's, and is by Dr. Susan Everett, a widely known and highly esteemed lecturer on Health, Hygiene, Physiology, etc. As the question is a grave one, and concerns women especially, we leave it open for brief, pointed replies:

LYONS, N. Y., November 4, 1871.

DR. HOLBROOK—*Dear Sir*: I have been examining late copies of THE HERALD OF HEALTH. I have never seen better numbers than the last three copies you sent me. Your "Studies in Hygiene" are worth the price of subscription. Taking it for granted that the inclosed note" may refer to the people of the United States, as well as England, Sweden, and Germany, it has occurred to me to propose a question, the answer to which might not be out of place in your next issue of THE HERALD:

If "a girl's chance for living is *always* a little better than a boy's," how does it happen at the men of this country outlive from *one six wives*? I am acquainted with a gentleman, of most promising physical health, who is or was, three years ago—living with his *fifth* wife. No one of the previous four wives had been "divorced." Each one had died a strictly natural, orthodox death.

In a little town of my acquaintance upon the Rio River, numbering less than two thousand people, twelve wives in good society died in as many months.

I am acquainted with a Female Seminary in Ohio which numbers one hundred and fifty pupils. A majority of these young ladies have step-mothers. I have met scores of professional men, clergymen, and others, who are living with second and third wife. So much have I found is state of things a rule, that I hesitate to judge of second and third marriages lest an implicated person be within ear-shot.

Only a few days ago, while in Wisconsin, it was my good fortune to listen to one of the

most charming voices I ever heard. In my rapture I turned to the mother (as I supposed), whose husband was sitting near us, and said, "from which parent does this lady get her exquisite voice?" A little hesitation was manifested upon the part of my hostess. I felt at once that a forbidden spot had been touched. Subsequently it was elicited that the present incumbent was Wife No. 3. The sweet-voiced lady belonged to Wife No. 1, who had long since passed on. This is but a tithe of what might be stated relative to the frequency of second and third wives.

Can you not start a public sentiment that shall render the *using-up* of even *two* wives a questionable proceeding? Wives who are duly cared for and sufficiently cherished are not apt to die prematurely. The present state of things is not less cruel than *inartistic*. The household that can be kept up only by *relays* of fresh wives is very far from a model one.

Yours sincerely,

SUSAN EVERETT."

SIR DUNCAN GIBB, in a paper read before the British Association, on Centenarian Longevity, makes some very interesting statements, derived from a comparison of four examples he had seen himself. Of these four, two were one hundred and three, one one hundred and one, and one one hundred and two years old. Mr. Gibb found these peculiarities in their bodily constitution:

1. The lungs performed their functions perfectly in every case.
2. The blood was well circulated by a strong heart to all parts of the body.
3. The chest was well formed, and of fair size. The cartilages of the ribs were not ossified.
4. The voice was clear, sonorous, and powerful, though tremulous in two cases.
5. The heart was healthy, and free from fatty deposits.
6. The eyes were good, and the sight excellent in every case, and no sense except hearing was impaired.
7. None smoked, chewed, or snuffed tobacco.

8. The mind was active, and the memory good.

9. The digestion in each case was excellent, and the teeth sound.

10. In each case the mind had been throughout life composed and free from care and distress.

The lesson drawn from these cases is this, that if people wish to live in health a hundred years they must have sound bodies, and take care of them. In other words, the body must receive that intelligent attention it deserves, and people must read and study the laws of hygiene in order to obey them.

GETTING RESTED EVERY DAY—METHODS OF GETTING SLEEP.—Every person who would live well should get so thoroughly rested once every twenty-four hours as to feel bright, fresh, active, and strong. Many do not do this, but go on feeling tired, over-worked, ill-at-ease, sick, never being rested from morning till night. No course could be worse. If a man wishes to last a reasonable number of years on this globe, and live in peace and comfort, he should get rested every day of his life. Many resort to stimulants, when they had better go to bed and to sleep. Sleep does not always come easily. The brain sometimes loses the power to stop thinking when the proper hour arrives for sleep, but keeps on, like the heart, acting involuntarily. How can such people get sleep is one of the most important questions they can consider. Shall they resort to chloral hydrate, morphine, tobacco, or as some do, ale, beer, or other alcoholic drinks? We advise no person to take poisonous drugs on his own account, but there are agencies of great value, better for common daily use than all the drugs in the world, which every person can learn to use without harm to himself, providing he is reasonably intelligent. One of the agencies is water. A tepid sitz bath taken just before going to bed, of such a temperature as shall be agreeable, is a beautiful sedative for very many persons, preparing them for sleep that is sound and refreshing. It may be used for ten or fif-

teen minutes, or even longer if agreeable. It should be taken in a warm room, and such portions of the body as are not in the water well covered with a blanket.

Still another remedy, and often more convenient, is a mild current of electricity, continuing from five to thirty minutes. The positive pole may be held in one hand, or, by means of a sponge placed over the stomach and abdomen, and moved about from point to point, while the negative pole may be placed at the feet. This is one of the best methods of producing a condition favorable to sleep that is known, and after a little study can be adopted by almost anyone. Every house should have an electrical apparatus, for electricity carefully and wisely used has great value for many purposes.

Still another agent, not yet very well understood, and one not to be advised except it can be given by those who know its use, is magnetism, by means of passes over the head or simply holding the hands of the person to be influenced. In a future number we may say more on this point.

Still another agent, is a very short shower-bath, or a hot foot-bath, or holding the hands, if hot, in cold water; or if the hands are cool holding them in hot water; or putting a cold wet compress over the abdomen.

The two best remedies, however, are the sitz bath at bed-time and the use of electricity. Whatever is done should be done with judgment and care.

TEN LAWS OF LIFE.—1. Temperance in all things, whether physical, mental, moral, affectional, or religious.

2. Justice to all creatures that be—justice being the exercise of precisely the same rules of life, conduct, thought, or speech that we would desire to receive from others.

3. Gentleness in speech and act—never needlessly wounding the feelings of others by harsh words or deeds; never hurting or destroying that which breathes, save for the purposes of sustenance or self-defense.

4. Truth in every word or thought spoken or

acted; but reservation of harsh or unpleasing truths, where they would needlessly wound the feelings of others.

5. *Charity*—charity in thought, striving to excuse the failings of others; charity in speech, veiling the failings of others; charity in deeds, wherever, whenever, and to whomsoever the opportunity offers.

6. *Almsgiving*—visiting the sick and comforting the afflicted in every shape that our means admit of and the necessities of our fellow creatures demand.

7. *Self-sacrifice*, wherever the interests of others are to be benefited by our endurance.

8. *Temperate yet firm defense of our views of right, and protest against wrong, whether for ourselves or others.*

9. *Industry in following any calling we may be engaged in, or in devoting some portion of our time, when otherwise not obliged to do so, to the service and benefit of others.*

10. *Love*—above and beyond all, seeking to cultivate in our own families, kindred, friends, and among all mankind generally, the spirit of that true and tender love which can think, speak, and act no wrong to any creature living; remembering always that where love is, all the other principles of right are fulfilled beneath it, influenced and embodied in its monitions.

OXYGEN TREATMENT.—The advent of the Water-Cure, invented by Priessnitz, a peasant resident of a Sicilian village forty years ago, was but the precursor of a multitude of good things—mainly Hygienic—for the sick. Indeed, the desire on the part of the people to be cured of their diseases without being poisoned, has resulted in so many improvements in medicine that when all of these methods are put together into one system, it makes a very respectable show. We have, for instance, the Water-Cure, the Movement-Cure, the Lifting-Cure, Treatment by Electricity, Animal Magnetism, Compressed Baths, Turkish Baths, the Grape-Cure, Light Gymnastics, and so on without number; all methods of great value when

properly used. And now more recently comes the Compound Oxygen Treatment, introduced into Philadelphia by Dr. Hartly, and into New York by Dr. Mitchell. It consists in taking into the lungs daily from three to six or eight inhalations of not pure oxygen, but a mixture of oxygen and nitrogen, in which the former exists in much greater quantities than in common air. It seems to be, strictly speaking, a Hygienic agency, like the others named. In civilized life few of us take sufficient oxygen into the lungs, as the savage does in his out-of-door life, and so we may under certain circumstances make up this deficiency as we make up a deficiency of exercise by some form of gymnastics, movements, or lifting, or as we increase the action of the skin by friction or the Turkish Bath. We shall have occasion to speak further on this topic at some other time.

IS THE CLIMATE OF MINNESOTA AS BENEFICIAL AS FORMERLY?—The New York Tribune has published a letter stating that the climate of Minnesota is changing, and not so beneficial to invalids as formerly, but meteorological observations do not show it. No doubt a larger number of worse invalids go there than once did, and fail to get well, but they would not have got well if they had gone there twenty years ago. Minnesota has changed in other respects more than in climate. There is more civilization there, more closely built houses, more air-tight stoves, more indigestible food, more whisky and tobacco, more doctors with their drugs, perhaps, and invalids stay in the house more, but there is no more moisture in the air, no more heat or cold, no more miasma, no more unhealthful climate. Much of the benefit an invalid receives often comes in getting away from civilization where he can rough it, and live simply. If the people of Minnesota wish to maintain the former supremacy of their climate, let them give invalids who go there a chance to live as formerly, and they will not hear any more unfavorable reports regarding the changes in their climate.

ANSWERS TO CORRESPONDENTS.

BY A. L. WOOD, M. D.

Exercise — How Much, When and How.—Physical exercise is as much a necessity of our being as eating, or breathing, or sleeping. True, we can live without it longer, but we can not live healthfully. No function of the body can be properly performed without it. Respiration, circulation, digestion, absorption, secretion, excretion, one and all are slowly and imperfectly performed without the rousing, stimulating, and vitalizing effects of exercise. He who does not take exercise knows not the pleasures of health, of good appetite, good digestion, free and full respiration, refreshing sleep.

The amount of daily exercise necessary for health depends upon the kind of exercise, and varies considerably with different persons and with the same person at different times. A safe rule to go by is to exercise until slightly fatigued. It should not be continued so long that an half hour of perfect rest will not entirely remove all feeling of fatigue.

Special exercise for retaining or regaining health should not, as a general rule, be taken less than two or three hours after a meal, except it may be some slight exercise, as moderate walking, riding, etc. A person should always be thoroughly rested after exercise before eating. Perhaps the very best time of day for taking exercise is from 10 to 12 o'clock in the forenoon, although the time may be varied to suit the person's convenience—always observing the above rules.

The kind of exercise best to be taken in any given case depends upon the person's conditions of health, strength, and occupation. Persons in good health, who are not overtaxed mentally or physically, will be benefited by almost any form of exercise, as walking, rowing, swimming, skating, lifting—if very carefully and systematically performed, if not, it is almost certain to prove injurious—dancing, gymnastics, etc. Persons suffering from any form of chronic disease, business and professional men, and others, engaged in any sedentary or other occupation, in which one portion of the body receives more exercise than it needs while others get little or none—these persons require some form of exercise which shall bring into action the unused portion of the body, equalize the circulation, soothe and rest the nervous system, without ex-

ertion or fatigue of body or brain, as the brain and nervous system have already done more than they ought and need rest. Active exercise in these cases, while it often apparently and really benefits, does so at the expense of vitality, which we Americans of the present day can ill afford to waste. Passive exercise, or that in which the person is acted upon by other persons, or by machinery, without effort of will or muscle on his part, is what these cases require. Rubbing, kneading, manipulations of various kinds, shampooing, vibrations, etc., are the most important forms of passive exercise. They are best given by machinery specially adapted for the purpose, as they can be applied so much easier, quicker, and more thoroughly, systematically, and perfectly than by hand, while some of the most important movements given by machinery can not be given without it. Those who have never tried it can have no idea of its soothing and resting effects upon tired brain and muscle. One of the most useful features of the Turkish bath, and the one upon which its pleasurable and resting qualities mainly depend, is the shampooing, which is simply one form of passive exercise. Horses are always "rubbed down" after long or fast driving. Why should not men be treated as well, after great exertion of body or brain? How long, think you, Bonner, Grant, or any other owner of first-class trotting or racing horses would intrust them in the care of a man who did not spend at least an hour a day in rubbing and manipulating them? These men know the importance of this passive exercise for their horses, but they never think of having it applied to themselves. Are not men and women of as much consequence as horses? If this treatment will improve the appearance, speed, health, and strength of horses, why will it not do the same for men? It will. Prize-fighters, and others in training for any great feat of physical exertion, are treated in the same way, and with the same results. Why should not the great benefits of these passive exercises be made available for higher and nobler purposes? Why should not the artist, the author, the banker, the business man, the clergyman, the doctor, the lawyer, the legislator, the manufacturer, the student, the teacher receive the benefits of this treatment as well as our horses and prize-fight-

ers? If this practice should, as it ought, be generally adopted, we should have more beautiful pictures, better books and papers, more successful business men, more eloquent clergymen, orators, and lawyers, a higher education, better morals, less sickness and suffering, and more perfect and beautiful men and women.

"But," every one will exclaim, "this is not practicable! It would require too much time and expense!" By the use of newly invented machinery it is now rendered eminently practicable, requiring but little time, and small expense, compared with the benefits to be derived.

Dyspepsia and the Vibratory Exerciser.—"What are the special effects of your 'Vibratory Exerciser' machine in a case of dyspepsia, complicated with torpidity of the liver, constipation of the bowels, and cold extremities? Will it cure dyspepsia?"

Dyspepsia exists in almost numberless forms and variations. Some of the most prominent conditions usually attending feebleness and want of action in the stomach are torpidity of the liver, constipation of the bowels and an unbalanced circulation of the blood, giving rise to cold extremities and more or less congestion of the head or some of the internal organs.

In such cases the Vibratory Exerciser applied to the feet, legs, hands, and arms, calls the excess of blood away from the congested parts to the extremities, thus relieving the congestion and at the same time warming the extremities and equalizing the circulation.

Applied directly to the stomach, it quickens the circulation of the blood through the capillaries of that organ, tones up and strengthens its muscular and other tissues, increases the flow of the gastric fluid, and supplies motion to the stomach and its contents, some form of which is absolutely necessary to good digestion. If an hour or more after eating, a dyspeptic's stomach feels full, heavy, and uncomfortable, a few minutes' application of the Exerciser removes the temporary obstruction in the capillaries, increases the gastric flow, imparts the necessary motion to the stomach and its contents, hastens digestion, and relieves the unpleasant sensations.

Applied to the liver, it produces rapid vibrations of its substance, accelerating the torpid circulation and increasing the secretion of the bile, thus purifying the blood, aiding the intestinal digestion of the food, and favoring the normal action of the bowels.

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A Letter from Mrs. Henry Ward Beecher.

While overhauling our papers, after the recent removal to our new quarters, we came across the following letter, which so appropriately expresses the general sentiments of those who read our Magazine, that we have concluded to publish it:

BROOKLYN, February 11, 1871.

S. S. WOOD:

DEAR SIR—In '69, while I was editing "The Mother at Home," I was much interested in a few copies of your "Household Magazine," which found their way into my house, whether to me or my husband, I do not know, nor does it matter. I was so much pleased that I wrote asking for an exchange, but receiving no answer, I let the matter drop. I write now, inclosing two dollars, with the request that if you can furnish me the whole set of 1870, you will do so, and also put me down as a subscriber for 1871. If you have not a set of 1870, please, for the extra dollar, put my daughter down for 1871, directing to Rev. Mrs. Samuel Scoville, Norwich, Chenango County, N. Y.

I think one copy comes to the office of the "Christian Union," edited by my husband, but I prefer to have one copy sent to the house for my own use.

Direct last year's numbers, if you have them, and this year's edition, if you please, to Mrs. Henry Ward Beecher, 125 Columbia Street, Brooklyn, N. Y., and oblige yours respectfully,
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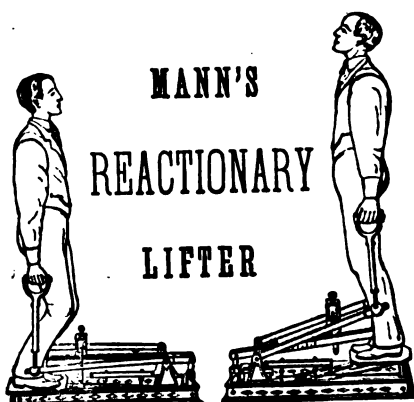
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GENERAL INDEX.

FROM JANUARY TO JUNE (INCLUSIVE). Vol. I. 1871.

POETRY.

	PAGE
A Greeting to the New Year..... <i>Mrs. D. Harry Prime</i>	8
A Brief Night's Rest	222
At the Cross..... <i>Elizabeth Oakes Smith</i>	209
Baby's Bath	17
Dust and Disease	159
Let Her Speak	216
Recipe to Enhance Personal Beauty.....	220
Some Hands Have Art	216
The Big Bell	257
The Bright Side..... <i>Phæbe Cary</i>	249
The Two Summer Lads	121
The Wooling..... <i>Houghton</i>	72
To Any Desponding Genius..... <i>Alice Cary</i>	162
Woman.....	17

GENERAL ARTICLES.

A New Discussion of Temperance Problems.....	1,
	49, 97, 145, 193, 241
A Word to Parents..... <i>Mrs. H. B. Gleason, MD</i>	100
Alcoholic Medication	145
Alcoholic Stimulants as Affecting Mentality..... <i>Sizer</i>	49
An Honest Day's Work..... <i>F. B. Perkins</i>	158
Arguing..... <i>F. B. Perkins</i>	113
At Sea with the Mormons..... <i>Mrs. E. E. Evans</i>	13
Boys, and What to Do with Them	151
	<i>Darwin</i>
Comparative Longevity of Man and the Lower Animals—Introductory, Writers on Longevity, and General Sources of Information..... <i>E. Ray Lankester, BA</i>	25
Country and City Life..... <i>Rev. C. H. Brigham</i>	158
Cousin Lucy's Story, or Should Consumptives Marry	250
	<i>Mary Atherton Bird</i>
Cow's Milk for Babies, How to Prepare it.....	172
Crumbs from the British Scientific Association—The Germ Theory, Spontaneous Generation, How to Prevent Lead Poisoning in Water and Other Liquids, Use of Solutions of Soluble Chlorides for Laying the Dust in Thoroughfares, Influence of the Soil to Produce Endemic Diseases, Antiseptic Treatment of Rinderpest and Scarlet Fever, Utilisation of Fibrous Cotton Seed, The Savages, Gold, etc..... <i>Mrs. Dr. Lydia F. Fowler</i>	57
Dangerous Exercise, Is Lifting a.....	119
Drink, Pauperism, and Crime..... <i>Harvey P. Peet, LL.D</i>	241
Education of Our Daughters—A Word to Parents, their Responsibilities	100

Education of Our Daughters—The College, Music, Drawing, Dress, etc..... <i>Mrs. E. B. Gleason, MD</i>	163
Education of Our Daughters—Eyes, Diet, Exercise, Sleep, School Girls Over-anxious, etc..... <i>Mrs. E. B. Gleason, MD</i>	201
Effects of Alcohol on Offspring	1
Food, Size, Climate, etc., as Affecting Longevity—Experimental Evidence, Summary..... <i>E. Ray Lankester</i>	267
Generative Expenditure and Longevity..... <i>E. Ray Lankester BA</i>	217
Habits of Study..... <i>Rev. C. H. Brigham</i>	52
Height and Weight.....	122
Hints about Thought..... <i>F. B. Perkins</i>	74
How to Prepare Cow's Milk for Babies—Artificial Human Milk, Various Dilutions for Various Ages, Schedule, Regulations of the Quality of the Milk, etc..... <i>A Mother</i>	172
Inherent Death..... <i>E. Ray Lankester, BA</i>	115
Intemperance and National Integrity..... <i>Aaron M. Powell</i>	193
Is Lifting a Dangerous Exercise? <i>Lewis G. Jones</i>	119
Longevity, Generative Expenditure and.....	217
Lord Bacon's Statements on Longevity..... <i>E. Ray Lankester, BA</i>	148
Man and the Lower Animals, Longevity of.....	25
Meddlers..... <i>W. T. Clarke</i>	6
National Integrity, Intemperance and.....	193
Neglected Rich	215
On Not Doing What You Like..... <i>F. B. Perkins</i>	158
Personal Influence..... <i>Henry Ward Beecher</i>	161
Physiology of Man—Cholesteroline, Glycogeny..... <i>M. L. Edgeworth, MD</i>	62
Physique of the Kaffirs, and their Habits of Life....	166
Railway Traveling..... <i>Rev. C. H. Brigham</i>	210
Schoolhouses	105
Sorrow and its Dangers..... <i>Henry Ward Beecher</i>	21
Spirit and Form, or the Relations of the Body with the Soul	264
Summer Resorts..... <i>Rev. C. H. Brigham</i>	259
Temperance and Religion ... <i>Rev. J. C. Holdbrook, DD</i>	97
That Great Cure-all, Righteousness... <i>Simple Simon</i>	168
Theories put in Practice; or, Extracts from the Diary of a Physician's Wife..... <i>Mrs. H. C. Birdsall</i>	18,
	65, 110, 160, 205, 245
Toning the Mind..... <i>Rev. John Monteith</i>	197
Various Kinds of Longevity... <i>E. Ray Lankester, BA</i>	69
Wholesome Houses	9
Why Doctors Die Prematurely..... <i>J. H. Bennett, MD</i>	103

STUDIES IN HYGIENE.

A Bad Bed, Cleanliness and Fresh Air.....	30
Abuses of Dress..... <i>Nichol's Journal of Chemistry</i>	125
An Interesting Query Answered, about Blood.....	196
A Word about Air..... <i>Godwin</i>	29
Care of Children's Teeth, from Dr. Ambler.....	269
Cleaning Blankets, the Use of Borax.....	29
Coating of the Tongue..... <i>Dr. DeCosta</i>	126
Consumption of Oxygen.....	223
Early Rising for Children.....	231
Eating too Fast..... <i>Dr. Jackson</i>	175
Effect of the Trees upon Climate.....	31
Excessive Longevity.....	127
Extinct Families..... <i>Harper's Weekly</i>	127
Facts about Sleep..... <i>Dr. Richardson</i>	174
Family Hygiene, Family Happiness.....	230
Fewer Born, but More Surviving... <i>T. W. Higginson</i>	76
Gymnasiums in the Days of Plato.....	270
Gymnasiums as Moral Reformers.....	269
Health and Health..... <i>Dr. Hall</i>	222
Hint to Water-drinkers..... <i>American Chemist</i>	79
Hygiene for Babies.....	230
Hygiene of Boots, Victor King's Experience.....	147
Hygiene of the Night..... <i>London Lancet</i>	270
Hygiene for Sewing-machine Operators.....	231
Hygiene for the Voice.....	231
Lasiness and Long Life.....	232
Light Sun-bonnets..... <i>Faith Rochester</i>	270
Look to Your Pumps and Water Pipes.....	29
Making Money.....	127
Man's Feet versus Bear's Feet.....	126
Mental Hygiene and Tobacco..... <i>Prof. Jolly</i>	232
Mistakes of Americans who Live in Cities.....	31
Motive Power in Ventilation..... <i>B. Stillman</i>	270
Naked Truth..... <i>Cornell Era</i>	175
Natural and Artificial Light, from Dr. Williams.....	271
Near-sightedness.....	126
Offensive Breath, from The Dental Register.....	271
One More Glass, Philosophy of Temperance Reform.....	34
Open the Doors..... <i>Medical Times</i>	175
Overtaxing Children's Brains..... <i>Dr. Richardson</i>	78
Perishing for Lack of Knowledge, High Aims.....	31
Perspiration, and the Skin..... <i>Journal of Chemistry</i>	30
Physical Capital for Children..... <i>Independent</i>	126
Political Hygiene..... <i>Medical Times</i>	174
Potatoes and How to Cook them.....	220
Potatoes Baked versus Boiled..... <i>Dr. Paine</i>	78
Precocious Children..... <i>Spurzheim</i>	127
Preventing Scarlet Fever..... <i>Christian Union</i>	76
Prolonged Vigils..... <i>Medical Independent</i>	137
Prospects of Female Doctors.....	175
Protection for Wet Weather..... <i>Faith Rochester</i>	269
Qualities for a Nurse.....	221
Relative Temperature of the Sides of the Trunk....	78
Sanitary Condition of Schools.....	76
Servant Girls' Knees..... <i>Richard Pavy</i>	30
Seven Best Disinfectants, and How to Use Them....	174
Smoking against One's Will.....	78
Society for Promoting the Spread of Hygiene.....	125
Soft Water..... <i>Dr. Youmans</i>	79
Students Now and Then..... <i>T. W. Higginson</i>	77
Tea Tasters..... <i>Scientific Review</i>	79
The Physical Influence of Sunday Rest.....	244
The Thermometer in Disease.....	223
Things that Hurt the Teeth..... <i>Dr. Ambler</i>	223
To Preserve the Color of the Teeth, from Dr. Ambler	270

Ventilation in Lecture Rooms..... <i>N. Y. Tribune</i>	7
Waists, What Dr. Robert White says.....	223
Watering the Streets with Carbolic Acid.....	224
Watering Teams Often.....	271
What the Brain Furnishes.....	173
Where do you Live!.....	30
Woman's Worst Enemy..... <i>Dr. J. G. Holland</i>	7

RECIPES FOR COOKING.

Beverages—Water, Toast and Water, Tea, Coffee, Chocolate, Cocoa, Lemonade, Barley Lemonade..	27
Graham Crackers.....	176
Gruels—Arrowroot (two recipes), Oat-meal, Currant, Groat, Sage, Tapioca.....	2
Lemon Pie, and How to Make Gums.....	125
Lemon Pie—Another Recipe.....	176
Molded Farinacea—Arrowroot, Barley, Rice, Len- tils, Ground Rice, Sage, Sage with Fruit, Semin- ola, Tapioca, Cracked Wheat.....	125
Pies—Pie Crust, of Potato, of Cream, Sour Apple Pie, Apple Pie, and Apple Cakes.....	5
Porridges—Wheat-meal, Oat-meal, Indian-meal, In- dian Farina, Arrowroot, Boiled Wheat, Lentil, Sago, and Rice, Milk, etc.....	2
Salads—Mixed Salads.....	224
Sandwiches—Cheese, Egg, Fried Egg, Omelet.....	272
Soups—Pea, Bean, Barley and Bread, Hotch-potch..	17
Soups—Vegetable, Brown, Barley, Celery, Spinach, Herb, Vermicelli, Barley Broth.....	224

EDITORIAL DEPARTMENT.

A Hindoo at an English Dinner-table.....	224
A New Year's Talk, Hygiene.....	33
A Plea Against Whiskers by an Old Man.....	7
A Wholesome Family.....	175
A Veteran in the Cause of Hygiene.....	22
Amount of Water Needed for Daily Use.....	2
Best Governed Place in the World.....	6
Bones Influenced by Food, their Composition.....	225
Characteristics of Wholesome Water, Rain-water..	127
Chloral Poisoning.....	27
Climates for Invalids, Mr. Bill's New Book.....	25
College Dormitories as Affecting Health of Students	15
Compensation, as illustrated by George Combe.....	37
Death of Alice Cary, the Poet.....	12
Deaths from Snake-poisoning in India.....	11
Died of Old Age.....	34
Diet for Children of Two to Ten Years of Age.....	4
Does it Pay to be Sick?.....	123
Does Sickness and Suffering Make People Better?..	127
Educated Nurses, the Demand for.....	2
Energy of Old Men, Von Moitke.....	129
First of January, Wine.....	23
Happiness, What it is and What it is Not.....	128
Healthiest Town in the State of New York.....	6
How a Centenarian Lives.....	27
How an Old Man Feels.....	123
How to Abolish War, Advancement of the Science..	273
How Water Gets Foul, Water we Must not Drink..	126
Hygienic Houses in New York City.....	62
Insanity and Poor Diet in England and Wales.....	22
Insanity in Paris.....	227
Is it Air, or is it Something Else?.....	226

Laws of Fermentation, Hebrew Customs	257
Letter from Rev. Charles Cleveland, 100 Years Old ..	275
Letter from William Cullen Bryant	225
Literary Value of Good Health	34
Loss of Power, an Interesting Calculation	132
Meritorious Article, Cream Yeast Baking Powder ..	82
Ministers Salaries	179
Miss Dr. Garrett, of London	82
Mixing with Strangers, Good Effects of	180
Monopoly by Male Medical Students	82
Narrowness and Blindness	132
New York Lady Surgeon in Paris	84
No Colds on Mount Washington	181
Objection to Women Doctors	226
Oldest Doctor in America, Theoph. Clark of Vermont	178
Railroad Horrors, a New Faculty Needed	180
Stamping Out Scarlet Fever	38
The Golden Decade, Best Periods of Life	273
The Thraldom of Fashion	36
Value of a Clean Mouth	273
Waste of Life, Some Striking Statistics	131
Weeding Out the Cowards	177
Weston, the Walker	36
What is and What Causes Consumption	85
Wheat-meal Flour, Difficulty in Getting it	276
Whisky and The Herald of Health	134
Young Doctors, Fifteen Hundred Graduates	133

HOW TO TREAT THE SICK.

An Ulcer Cured by a Dog, Letter from Dr. J. M. Hole	41
Care of the Teeth	278
Cold Water Treatment of Typhoid Fever	230
Cure for Every Drunkard	183
Cure for Erysipelas	183
Cure for Rheumatism, a Novel Remedy	136
Cure of Stammering, a Stammerer's Method	137
Has Scarlet Fever any Right to so Many Victims? ..	39
Headache, its Cause and Prevention	58
Healing Ulcers by Transplantation	135
How I Cured a Man in a Doodine, Letter from S. S. ..	277
How to Get the Most Good out of the New Hygienic Treatment, Letter from Howard Glyndon	86
Infant Feeding, a Hint to Mothers	248
Ingrowing Toe-nails, and their Treatment	135
Painter's Colic, What an Old Painter says	88
Poisonous Effects of Bee-stings, a Preventive	88
Remedies for Poisoning by Ivy	137
The Causes of Erysipelas, as a General Rule	208
To Prevent Snoring, a Patent Apparatus	137
Tooth Wash	Medical Investigator 77
Treatment of Scarlet Fever, Dr. Hole's Method	182
Vaccination and Contagion Due to Living Particles.	136

ANSWERS TO CORRESPONDENTS.

About Fretting, a Silly and Unchristian Thing	141
Age and Youth Sleeping Together	240
Cause of Poor Teeth	233
Chapped Hands and Lips	141
Chills and Fever, Home Treatment of	232
Climates for Weak Lungs	233
Copper Cooking Utensils	141
Cure for Ingrowing Toe-nails	233
Dimness, its Cause and Prevention	43
Eating before Retiring	44
Eating Fruit in the Evening	184
Effect of Alcohol upon Longevity	140
Epistaxis, or Bleeding from the Nose	379
Flatulence, its Cause and Cure	232
Fruit between Meals	243
Horseback Riding	91
How to Give Children an Appetite	185
How Much to Eat	280
Impure Blood	92
Indentation of the Forehead	92
Lead Water-pipes, Hot-water Pipes	184
Lemons and Biliousness	233
Liver as Food	44
Over-study, Treatment for	91
Position of the Head during Sleep	44
Reading after Meals	279
Remedy for Cold Feet	91
Ripe Fruit and Cold Water	141
Rules for the Examination of Recruits	43
Short-heeled Shoes and Flat Feet	43
Sleeplessness and Indigestion	185
Soda Bread, Buttermilk and Eggs	233
Spirometer for Weak Lungs	233
Swelled Knee	280
The Treatment of Tetter	279
To Cure a Cold upon its First Indication	44
To Prevent Injuries from Runaway Horse	44
To Prevent Spring Sickness	184
To Prevent the Hair Falling Out	279
To Remove Hair Permanently	43
Tomatoes as Food, Dio Lewis's Opinion	92
Torpidity of the Liver and Constipation	140
Tropical Fruits, their Use for Dyspeptics	185
Weak Lungs, Position during Sleep	91
FOOD FOR MIRTH AND THOUGHT	42,
	89, 138
NOTICES OF NEW PUBLICATIONS	45,
	93, 142, 186, 234, 281

GENERAL INDEX.

FROM JULY TO DECEMBER (INCLUSIVE). Vol. II. 1871.

POETRY.

	PAGE
Be Not Discouraged.....	209
Castles on the Sands.....	Mrs. D. Harry Prime 121
Childhood's Laugh.....	Elizabeth Oakes Smith 161
Down in the Heart.....	Lydia A. Millard 264
Flying to Shelter.....	Elizabeth Oakes Smith 57
Good Nature.....	112
Jim's Logic.....	Sunne Tynle 17
Just a Thought.....	Frances Dana Gage 63
Make Home Pleasant.....	M. A. K 209
Rest.....	168
Strive, Endeavor.....	168
The Fool and the Farrier.....	Joel Benton 112
Tolling Up the Hill to Fame.....	James Burnley 9
Too High a Price.....	Emerson 172

GENERAL ARTICLES.

Abnormal Longevity of Man.....	E. Ray Lankester, M.A. 262
A Few Queries about Darwinianism.....	F. B. Perkins 167
Amusements.....	Rev. C. H. Brigham 150
A New Discussion of Temperance Problems.....	1, 49, 97, 146, 193, 241
A Night in a Farm-house.....	18
A Visit with Father Cleveland.....	Wallace Norris 55
Chinese Diet.....	G. W. Yapp 116
Early and Late Hours.....	Rev. C. H. Brigham 201
Every Tooth is Worth a Diamond.....	L. J. B. Leblanc. 102
Evils of Hair-Dyes and Cosmetics.....	S. B. Chase, M.D. 109
Growing Old.....	Frances Ellingwood Abbot 27
Health Trip to the Orient—The Doctrines of Mahomet, Where St. Paul was Shipwrecked, Oriental Life, Alexandria, Bundles of Women, The Common People, The Old Tomb.....	Dr. L. F. Fowler 155
Health Trip to the Orient—The Steam-Engine in Egypt, The Delta, Arab Men and Women, The People, Villages of Naked Children, Picking Cotton in the Fields, Moslem Land at Worship in the Fields, The Mosques in Cairo, The Mosque of Mahomet Ali, The Citadel.....	Dr. L. F. Fowler 251
Home Life.....	Rev. C. H. Brigham 66
How a City Invalid was Cured by a Night in a Farm-house.....	Agnes Vernon 18
How Best to Promote the Cause of Temperance.....	O. B. Frothingham 241
Information as to Human Longevity.....	E. Ray Lankester, M.A. 73

Keep the Distaff Ready, and God will Send the Flax.....	Frances Dana Gage 11
Lessons from the Chicago Disaster.....	T. K. Brecker 1
Long Journeys.....	Rev. C. H. Brigham 1
Longevity of Man.....	E. Ray Lankester, M.A. 1
Management of Children.....	Frances Ellingwood Abbot 27
Ministers and the Temperance Reform—Aroma and other Ingredients, Reminiscences, England and Paul the M. D., Actual Experience, The Narrative, Conclusion.....	Rev. William Patton, D.D. 1
Mistakes of Temperance Reformers.....	O. B. Frothingham 241
My Medical Adviser.....	Lydia M. Millard 1
Old Age.....	Rev. C. H. Brigham 241
On a New Set of Teeth.....	F. B. Perkins 167
Ordinarily, Never.....	P. H. Hayes, M.D. 1
Physicians and the Temperance Reform.....	John Higginbottom, M.D. 1
Secret of a Wholesome Life.....	Miss M. M. Wines 1
Sham Kindergarten Culture.....	Elizabeth P. Peabody 1
Statements as to the Duration of Human Life—Hobbes, Individual Opinion, Chinese Division of Life, Old Men in China, Shortness of German Lives, Shortness of American Lives, Savages, Various Occupations, Sovereigns, Comparative Longevity of Married and Unmarried.....	E. Ray Lankester, M.A. 1
Statements as to the Duration of Human Life—Probable After-lifetime of Males at a Given Age, Probable After-lifetime of Females at a Given Age, Probable After-lifetime for Both Sexes at a Given Age, Probable After-lifetime at a Given Age, from Old Sources, Probable After-lifetime at a Given Age, for Both Sexes, Interpretation by the Law.....	E. Ray Lankester, M.A. 1
Statements as to the Duration of Human Life—The Influence of Various States of Civilization.....	E. Ray Lankester, M.A. 1
Temperance Reformers, Mistakes of.....	1
Temperance Among the Ancients.....	Rev. D. M. Child 1
The Climate of Egypt—Slavery.....	1
Theories put in Practice; or, Extracts from the Diary of a Physician's Wife.....	Mrs. H. C. Birdseye 61, 113, 162, 267
The Wine Question.....	Rev. J. C. Holbrook 1
When Should Children be Taught to Read.....	1
Wholesome Life, Secret of a.....	Ellen E. Hild 1
Woodland Rambles.....	1
Work.....	Rev. C. H. Brigham 1

STUDIES IN HYGIENE.

Amount of Sleep.....	<i>Scientific American</i>	78
Artificial Teeth Capable of Producing Salvation		111
Care of the Health in Hot Weather.....	<i>D. H. Jacques</i>	30
Idler and the Eyes.....	<i>C. Jewett</i>	221
Correlation of Vital Force.....	<i>College Courier</i>	222
Determined to Die Rich.....	<i>F. E. Abbot</i>	221
Disinfecting Excreta.....		77
Diseases Produced by Meat.....		79
Does Habitual Drunkenness produce Insanity?.....		79
Eggs versus Meat.....		173
Epoch of Justice for Women.....	<i>T. W. Higginson</i>	79
Health and Long Life.....	<i>Houghton</i>	75
How to Distinguish Healthful Soils.....		77
Hygienic Treatment of Crime.....	<i>Golden Age</i>	30
Hygiene for the Sabbath.....	<i>S. E. Todd</i>	78
Hygiene and Alcohol.....		125
Hygiene of the Ax.....	<i>Geo. I. Butler</i>	127
Hygiene versus Drugs, from Harper's Bazar.....		137
Hygiene in Diptheria, What Dr. Reeves says of it.....		223
Importance of Cookery.....		223
Increasing Drunkenness in England.....		77
Inordinate Industry.....		176
Is there any Pure Water.....	<i>Once a Week</i>	126
Marriages that Propagate Disease.....	<i>Dr. Broadwell</i>	31
Music in Hospitals, What an English paper says.....		175
Oatmeal, the National Dish of the Scotch People.....		223
Doctors and Health.....	<i>Journal of Chemistry</i>	31
Overwork, How it is Killing our Public Men.....		126
Poisonous Wall Paper.....	<i>Boston Journal of Chemistry</i>	78
Queries in Hygiene with Answers—Tobacco and Alcohol, Are the Negroes Temperate? What is Chloralum? Carbolic Acid as a Disinfectant, The Shoes we Wear, Are Potatoes Wholesome? What is Bird's-Nest Soup? Are there any Golden Rules for Smokers? May one Swallow the Stones or Seeds of Grapes, Apples, or Cherries? Cundurango, What causes Hydrophobia in Dogs!.....		219
Queries in Hygiene with Answers—Disinfectants, The "Germ Theory" of Disease, Is the Human Race Deteriorating? Let Young Children have a Dog to Play with, A Hearty Meal in the Middle of the Day, A Peck of Dirt, Baking Powders, Cutting off the Beard with a Razor every Day, Tobacco Statistics, Life Insurance, What Shall I do with my Boys? Power to Resist Disease, Suicide and Insurance.....		268
Rest, Considered by an English paper.....		124
Rice and Milk and Hard Work.....	<i>M. E. Cornell</i>	125
Skill of Day versus Night-Workers.....		79
Soda Water, How it is Made.....		75
Summer Drinks, or Dangerous Compounds.....		126
Sunbaths, What Dr. Walter says of them.....		124
Taking Cold in Summer.....	<i>Medical Independent</i>	78
Teeth Restored—Bone-Builders.....	<i>Ch. Union</i>	223
Ten Questions in Hygiene—Lead in Water, Is Rain-water Pure, Privies, Impurity of Water, Do Women Suffer more than Men, Tapeworms, Ophthalmia, Quinine, Best way to keep Flour, Wholesome Food.....		173
The Hygiene of Dress.....	<i>E. S. Phelps</i>	176
The Replanting of Teeth.....		78
The Uncertainty of Life.....	<i>N. Y. Observer</i>	126
Water, Diseases Caused by its Impurity.....		75
Water, the Amount Used.....		30
What Happened to the Little Boy who Would Smoke		26

RECIPES FOR COOKING.

Preparations for Invalids—Barley Broth, Bread Soup, Barley Water, Rice Water, Sago Soup....	32
Puddings—Apple, Baked Apple, Arrowroot.....	30
Puddings—Boiled Apple, Boiled Arrowroot, Apple and Bread, Batter, Barley, Baked Batter with Fruit, Bread, Common Bread, Bread without Milk or Eggs, Bird's-Nest, Carrot.....	128
Vegetables—Potatoes, Mashed Potatoes, Boiled Carrots, Stewed Carrots, Haricoot Beans, Beans.....	32
Vegetables—Asparagus, Cauliflowers, Boiled Vegetable Marrow, Baked Vegetable Marrow with Onions and Sage, Rice.....	30

EDITORIAL DEPARTMENT.

A Glance Backward and Forward.....	273
An Abnormal Period.....	180
An Open Question.....	275
A Woman's View of the Temperance Question.....	177
Borrowing Joy.....	37
Carpeted Floors.....	36
Compression of the Feet.....	37
Death of Phoebe Cary.....	131
Dexter's Stable.....	229
Diseases Induced by Food.....	34
Deterioration in Milk in Feeding-Bottles.....	161
Education in New York.....	36
Evils Beside Intemperance.....	34
Health Habits and Amusements—A Letter from P. T. Barnum.....	225
Hoarding up Wealth.....	37
Hospitals, Hygiene, and Women.....	37
How a Man Feels when He is Hit by Lightning.....	35
How Much Tea and Coffee is Used.....	36
How to Make Graham Flour, Faith Rochester's Plan.....	35
How They Treat American Women Medical Students in Germany, A Lesson for Bellevue—A Letter from Dr. Mary Safford.....	129
Impure Air as a Cause of Disease.....	227
Interesting Cases of Hereditary Longevity.....	37
Lessons from Peter Cooper.....	33
Marrying for Money.....	36
Money and Long Life.....	161
Moral Hygiene and Tobacco.....	36
Normal Class of Physical Culture.....	161
Nutrition, or Rather Strength Stored Up in Food....	36
Shall we Send our Children away from Home to be Educated.....	228
Social Crimes.....	179
System in Brain-Work.....	229
The Exerciser.....	131
The Suicidal Propensities of the French.....	36
When is a Man Educated?.....	36
William Howitt's Habits of Life, a Letter.....	31

HOW TO TREAT THE SICK.

How to Cure Stammering.....	133
Treatment of Constipation.....	36
Treatment of Rheumatism by Electricity.....	132
To Prevent Pitting in Small-Pox.....	37
Typhus Fever.....	36
Notes for the Sick Room.....	39
Prevention of Small-pox.....	39

ANSWERS TO CORRESPONDENTS.


Adam's Apple.....	88
A Good Precedent.....	88
Antipathy to Strawberries.....	89
Baking Powders.....	88
Chewing Gum.....	230
Climate for Consumptives.....	134
Climate for Nervous Diseases.....	41
Climate of Southern California.....	182
Condensed Milk for Babies.....	182
Diet for Constipation.....	88
Earache.....	182
Exercise for Sedentary People.....	134
Fetid Perspiration of the Feet.....	89
Fever and Ague and Quinine.....	135
Freckles, Discolorations, etc.....	41
Hard Water and Constipation.....	89
Headache.....	41
High-heeled Boots.....	135

Honey.....	
How to Keep Cool.....	
How to Quit Smoking.....	
Ice-Cream.....	
Meat for Dyspeptics.....	
Meat in Summer.....	
Milk and Dyspepsia.....	
Night Sweats and Numbness.....	
Nitrous Oxide for Extracting Teeth.....	
Soap for the Hair.....	
Strengthening the Lungs.....	
Sunstroke—Cause, Prevention, and Cure.....	
Tall or Short.....	
Varicose Veins.....	
Wine and Exercise.....	
NOTICES OF NEW PUBLICATIONS.....	90, 136, 183.
OUR DESSERT TABLE.....	224



JUL 1969

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